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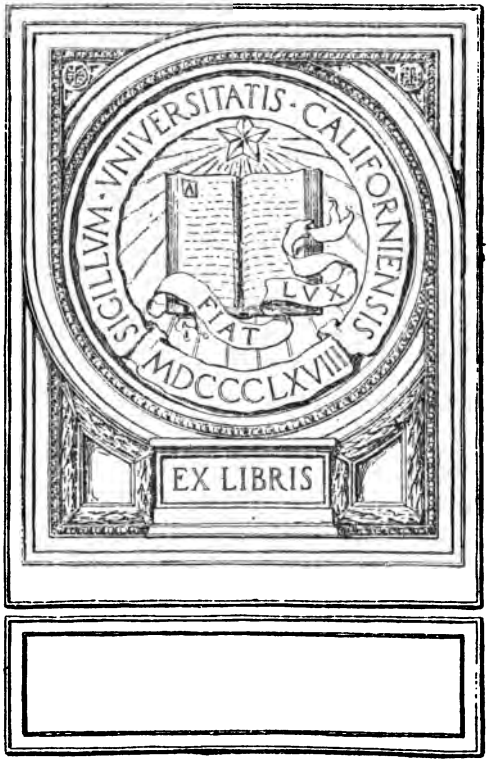
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WHEN THE WORKMEN HELP YOU MANAGE

BY

WILLIAM R. BASSET

UNIV. OF CALIFORNIA

NEW YORK
THE CENTURY CO.
1919

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D. J. S.

FOREWORD

We are not now asked by labor to find ways to pay higher wages through shorter hours. That is only one small phase of the employer-employee situation. What we are now really asked (although not always in precise words) is to devise some method by which the very wage system can be saved. It is a challenge to show that capital has a function.

The fullest justification would be to show that the individual is better off under a wage than under any other system—that he is not a mere machine but a part of industry equal in dignity to any other part.

I hold that capital can be justified—if only it is intelligent.

Through some years past, as a result of my own and my organization's experiences in a thousand and a half industrial plants, I have been steadily drawn to the conclusion that the man is bigger than the machine—that the best of industry cannot be brought out until the right relation is discovered between the employer and

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the employee. By right relation I denote one which permits both parties to express themselves in their work, to make satisfactory and continuous profits on the clean basis of bargain and sale, without paternalism in any form and without the intervention of any outside agency.

My experience teaches me that no one rule or system is properly applicable to every industrial unit but that a method can always be worked out provided the situation is scientifically studied and digested.

The principles do not change; the applications always change. It is the principles which are most important. In the within pages I have developed the principles from experience and then given a number of specific cases of their entirely successful application.

Most of the chapters herein have previously appeared in pamphlet form and they have been correlated in a book because the demand for the pamphlets seemed to indicate a very general approval of my thought.

WILLIAM R. BASSET.

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WHEN THE WORKMEN HELP YOU MANAGE

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WHEN THE WORKMEN HELP YOU MANAGE

CHAPTER I

THE NEW BASIS OF INDUSTRY

Our big problem to-day is the fitting together of employer and employee upon a new basis of complete coöperation, so that industry may realize its possibilities and its participants may each have a fair share of present profit and future opportunity. Upon the human factor hangs the future of American industry.

Charles M. Schwab has given public warning; so has Edward A. Filene. Our great bankers have sensed the new order more quickly than the strictly industrial men; Charles H. Sabin, president of the Guaranty Trust Company of New York, said in an interview for *Forbes's Magazine:*

"The game of life will be played differently. . . . There will be a levelling process; workers will demand and receive a larger share of the

comforts and good things of life. . . . To my mind, it is only fair that our laboring people, our artisans, our farmers, and our small business men should receive an increasing share of the good things of life. . . . In the interest of these very people, entirely apart from what is usually called the capitalistic class, it is highly essential that the changes which bring about these desirable results be rightly guided and that they proceed along sound economic lines. Otherwise we shall have revolution, anarchy, and loss and suffering all along the line without compensation to any one."

The Guaranty Trust Company is the second largest financial institution in the country, and its president is not an iconoclast. He has seen the rise of the Labor party in England, the vast increase in the importance of labor unions in this country (an increase now at a point where, if the unions become political and fuse with the Socialists, they will hold the balance of power), and the general world trend toward democracy.

The vast movement that began in Russia and there reached such absurd lengths, reaches all over the world. There is a stirring everywhere of the worker; it springs from an initial desire on his part to have recognition. But, once started, it quickly topples over into a desire to

rule to the exclusion of all other classes. And to any one who has made a long and close study of labor in industry it must be apparent that our own industrial relations are not in such form, nor are the employers mentally prepared, to meet the changing point of view of the workman.

I heard a fairly large employer remark at the close of the war: "The boys will come back from France thoroughly disciplined and ready to work. The work here will seem easy after what they have gone through, and their discipline will make them ready and willing to take orders. We shall have no more strikes."

That man was living in yesterday; he belonged to that class who clamor for wages to be reduced and industry to go back to the old basis of "hiring and firing" wherein the owner is the exclusive boss and the worker is supposed to be glad to be alive. The delusion would be amusing were it not likely to result so seriously for many creditors and stockholders; for the business that preserves those tenets will be able, at the best, to survive only a few stormy years.

These two propositions can be taken as absolute:

(1) If wages are unnaturally depressed regardless of the cost of living, we shall have a

series of anarchistic strikes—regular Bolshevik class wars—that will paralyze industry and perhaps destroy it.

(2) If there is a period approaching that of 1914, when hundreds of thousands were unemployed, state socialism will come in at once, and the state will have to support the unemployed.

In either event, both the employers and the employees will lose. But there is a clear way ahead if the industries provide themselves with markets that will absorb full time during twelve months of the year, and so arrange work and wages that every man will have a chance to express himself in his work and to earn wages that not only satisfy him according to his ability, but that also promise material increases without end as he progresses in ability.

Full-time production and working relations satisfactory to all parties are to be had by those who, with open minds, seek them. They are not among the impossibilities. But to attain them we must discard many old ideas and go forward with open minds.

The solution of the labor problem is not a thing by itself, but reaches into every branch of an industry. The variety and complementary natures of the lines made, the overcoming of seasonal production, the extension into foreign

and other markets, all may be forced upon the owner by the single consideration of procuring and keeping together a stable human institution throughout the year.

There are some great lessons which the war has taught us with respect to workmen. The first is that money alone will not hold men. The factories paying the highest wages had exceptionally large turnovers; a steel plant that paid high wages and large bonuses had nearly the largest turnover in the country; the shipyards paid well; but in the largest of them, in spite of all the well-known "labor methods" being in force, the workers came and went so rapidly that a foreman seldom knew who would work for him on any day. A teacher of riveters in this plant said in despair that he no sooner had a man well taught than he left.

We have also learned that speeding up neither helps production in the long run nor holds men. The riveters of the Emergency Fleet Corporation, spurred on by Mr. Schwab's personality and the offers of rewards, made startling records for a time; but then they fell back and the average dropped even below a rather low standard. The spurts had reactions which showed that they did not pay.

I have noticed this in every branch of indus-

try—you can speed men up for a time, but the steady worker will eventually prove more valuable than the man who can only spurt; that man will either lay off altogether when his spurt is done or he will relax to subnormal for weeks.

We have also learned—and this is most important—that pride in work will do more than employment "methods" or pampering; in those shops possessing a feeling that employer and employee were all one in working for the winning of the war and there was no suspicion of undue profits on the part of the employer, the labor turnovers were comparatively small and the production per man comparatively large.

This yearning for recognition of work, for recognition of the dignity of labor in terms other than money, is further shown by the progress of strikes. Formerly most of the strikes were on the subject of wages, because wages are the easiest way of expressing dissatisfaction—money is the supposed universal cure-all. But when the workers got all the money they could ask for, they began to strike for union recognition—and union recognition is only another way of asserting independence; of saying that they desire a place in industry equal in dignity to that of the employer, that they want a recognized position. Broadly viewed, the whole

union movement is a struggle to obtain a recognized place in society.

We are apt to forget what unions are, because of the attitude of the business agents and the demagogues who do so much to obscure the real purpose of unionism. The unions have had a hard battle, and, like individuals with a sense of insecurity in their social positions, they are prone to overdo things. But unionism really arose as a protest on the part of the workmen in mass against the loss in dignity of labor that the introduction of steam and the division of labor caused.

The movement is a perfectly natural one, and, though it often does and often will take wrong tacks and be destructive instead of constructive, the true orientation will obtain when the worker does find his true position of dignity. The employer did not take away that position in the first instance, but he can remodel industry to restore it—not by going backward but by going forward. The unions are results and not causes, and they will, willy-nilly, become entirely constructive once the causes that brought them into being are removed. This is clearly shown by the inability of the unions' leaders to control their men after all ordinary demands have been met. Then they strike simply out of

dissatisfaction with work and usually without knowing why they are dissatisfied. Employers attribute their actions to pure "cussedness."

The Government and the union leaders solemnly, and with entire good faith on both sides, covenanted in 1917 to preserve the pre-war status of industry for the period of the war. They did not preserve it; there were more than three thousand strikes during the war, and there are going to be more. The basic eight-hour day has been generally established. Most of the employers who used to be at war with the unions have made their peace or have seen their properties taken over by the Government. Practically all of the old differences between labor and capital—that is, hours and wages—were settled for the time being on government work. On top of big wage increases many, perhaps most, employers, of their own free will, put in bonus systems, profit-sharing schemes, or other devices to stimulate production and interest. And up to date only a small percentage of the plans based solely upon giving the worker more money for his labor has increased his interest or quieted his boiling discontent. None of the plans will permanently quiet him. One of the largest employers said:

"We can make all the agreements that we

want to have a labor peace; if we make enough of these agreements we may accentuate the white paper shortage—and nothing more. We are simply agreeing that natural forces shall cease. We are just baying at the moon."

President Wilson's Mediation Commission, after making an intelligent study of conditions in a fairly large number of localities, reached the conclusion that industrial unrest is primarily due to the lack of a healthy understanding between the parties to industry—between the employer and the employee. That there is no general understanding is due to several causes.

There are few American workmen. It is rare indeed to find a native-born American at a machine in a big industrial plant. We find the American-born on farms, in offices, acting as foremen or superintendents, or engaged in a small way in individual enterprises. Mr. Gompers, the President of the American Federation of Labor and the leader of laboring men generally, was born in England. Even the first generation of the immigrant prefers the white collar. A member of a draft board during the war commented on the fact that the registrants who were foreign born commonly had trades, but that the American born were clerks.

The American workman is a political myth.

He is as rare as the allegorical figure marching bravely to work wearing a square cardboard cap and carrying a full dinner-pail. The big majority of the workers are American citizens, but a very considerable portion of them do not speak English. They are, generally speaking, loyal, but in a Platonic, international way. There are other things in their lives that mean more to them than being Americans.

The American with a public-school education left industry because being a workman is no longer dignified. Steam and subdivision of labor changed the status. A machine used to be a tool in the hands of a man; now the man is an assistant to a machine. The Taylor System of Scientific Management aims so to symphonize the machine and the man that the man will be as dependable and automatic as the machine.

Take a machinist. The machinist used to be an all-round man who could use a lathe or a drill-press, or do practically anything in metal. Give him time enough and he could build a locomotive or a ship. If he was working for any one, he had always before him the opportunity to start a little machine-shop of his own. But to-day, outside of tool- and die-makers and repair men, there are few machinists. No one man builds all or even the smallest part of an

automobile. Instead of general machinists, one finds a series of skilled machine assistants, men who semi-automatically feed in bits of metal. What is the result? These men lose their individuality. They can not work alone; they must work in conjunction with a machine.

Being an assistant to a machine is not a position of particular interest. American boys do not take to it. But this did not make much difference as long as there were plenty of foreigners streaming into the country, ready to do anything.

The machine was, for the time, paramount, and the idea was to have enough machines so that production might go along almost without human aid. The machines were supposed to turn out so much a day, but they did not do it; also a deal of imperfect work came through.

One day a factory-owner awoke to the acute realization that men were important; that it was just as essential to have good men as good machines; that, although some machines might be automatic, a factory was not. He began to reckon with the human element. It was then that we began to hear of labor turnover—that is, the number of men who are hired each year in order to maintain a definite working force.

Nobody had kept any statistics. When these

were kept they were illuminative. Some establishments discovered that they were hiring three thousand people a year in order to maintain an average working force of a thousand. They further discovered that it cost money to break in new people; that when a man left or was fired his employer lost from thirty dollars to five hundred because it cost that much to break in a new operator. American industry produced only a fraction of its potential output solely because workers would not stay on the job.

Long-headed employers were quick to recognize that the worker as a human machine had scarcely more interest in the product than had the inanimate machine. Some thought that the interest might be held by money, and therefore they paid men, not for the time they spent in the factory, but for the work that they did—by the number of pieces turned out—or else they provided some other kind of a wage incentive. Others tried to draw interest, if not to the factory then about the factory, by providing better living conditions, recreational opportunities, medical assistance, and a great number of other things that go under the general head of "welfare work." Judge Gary, the chief executive of the United States Steel Corporation, noted

the changing conditions, and he stated this principle:

"There is no way of permanently settling any great question involving the welfare of humankind except on the basis of right and justice."

He felt that if he could not interest the workers in the work, still he might interest them in the results, as partners. He evolved a stock-purchasing plan for employees back in 1903. To-day employees of the Steel Corporation hold stock to the value of nearly nine million dollars. Many other employers followed the lead.

Such profit-sharing is splendid in conception; it is the thought of the employer and employee working together on the job and sharing the fruits of good work. But a large corporation does not arrive at its profits by any such direct method; their calculation is very complex, and many factors, over most of which the worker has no control, enter into their make-up. The eventual connection between the day's work and the year's dividends is even less dramatic than the relation between the tax stamp on a package of tobacco and the coupon on a Liberty Bond.

In addition, the average workman can not buy enough stock to make the dividends an important part of the year's income, and, even if it

were large enough, it is doubtful if the worker who grasped finance sufficiently to understand dividends would long remain a worker. The purchase of stock by workers is splendid as a thrift movement which will encourage forehanded views on life, but it has nothing to do with the day's work or with a real proprietary interest in an employee's work.

Moreover, the stock-purchasing plan for workers does not make for the democratic interest, because the workers, as such, are rarely represented on the Board of Directors which determines the expediency of dividends. It is not easy to explain the passing or cutting of dividends to the ordinary investing stockholder, but human expression has not yet reached the point where such action can be made clear to the worker who has done his work well and bought his stock with the fixed idea that it would return more interest than the savings bank.

As yet I know of no corporation—at least, of any size—in which the majority of the stock or even a "working majority" is held by the employees.

Companies that did not care to risk the passing of stock control, and feeling that anyhow the employees were mainly interested in money, have evolved profit-sharing plans—by which

a percentage of earnings was distributed pro rata to the men on the pay-roll.

Welfare work, stock ownership, profit-sharing —all are in the way of sharing the fruits of industry with the worker in order to attract and hold his interest and thus gain his coöperation. But they have not accomplished all the results that were hoped for. Welfare work has been confused with "uplift," and workers—in common with most other people—bitterly resent being "uplifted" by main force. The profit-sharing plans have the objection that workers generally do not understand the process by which profits are made and do not connect them with the actual work that they happen to be doing. The bonus payments for work accomplished do stimulate production, but at the same time they transfer the interest from the work to the money, and a man is apt to consider that only the amount of work is important and not the quality. None of these plans has yet touched the real point at issue—the changing of the status of the worker so that he can express individuality and thus have the same sort of interest as he would have if he were working for himself.

The American worker—the old-time mechanic —passed from big business quickly; the foreigner, glad to gain a livelihood, accepted the

conditions without question as long as he retained his old-world ideals; but now he too is asking for something more than work and wages. The urge for a position, for a job as an intelligent human being, is wholly natural when one analyzes the course of industrial progress. To work day in and day out without interest, to gain only a sustenance, is not living; having had a taste of better things, the workers now want more of them—to acquire something of the status of employers.

The British Labor party has expressed its desire for recognition in its now celebrated platform, a copy of which should be in the hands of every American employer:

"What the Labor Party looks to is a genuinely scientific reorganization of the nation's industry, no longer deflected by individual profiteering, on the basis of the common ownership of the means of production; the equitable sharing of the proceeds among all those who participate in any capacity, and only among these; and the adoption, in particular services and occupations, of those systems and methods of administration and control that may be found, in practice, best to promote the public interest."

A very few years ago—in fact, at any time before the war—talk such as the above would

have been dismissed as visionary and socialistic. But we have seen our own country go, for the purposes of war, upon a basis of socialism. The public control of prices and financing, the taking over of the means of communication, and the heavy taxation are all socialistic in the extreme. They amount to a national pooling of lives and property—the rights of individuals cease to be paramount and give way to the right of the nation. What we should have thought socialistic in 1914 is now commonplace; we are adopting socialistic principles in business every day, though divorcing them from the name of socialism.

The American worker is not socialistic in the same sense as the European. The American Federation of Labor is against socialism as such, but it does stand, and with it most of the unaffiliated workers, for many of the principles set forth in the program of the British Labor party, which is frankly socialistic.

The aims of neither the British nor the American labor people end with wages, working conditions, and hours. They embrace complete social programs which will give the worker an opportunity to express his individuality. The fear of the employer is that this expression will mean the suppression of profitable industry.

Should not the employer, on the contrary, welcome any change in the industrial relation? For will not the advantages to be gained through coöperation of the human element be so great as to overcome the undoubtedly higher costs in other directions?

American employers everywhere recognize that their relations with labor are not satisfactory. It is trite to say that the human waste is the greatest of all. The unthinking blame that condition on labor; the thinking look over their own houses to see if the difficulties may not be mutual. I have generally found that the troubles are of mutual origin—although in the larger establishments neither employer nor employee could put his finger upon the origin. For instance, most piece rates are unscientifically fixed and compensate without an exact regard for the labor expended. Rates that are too high or rates that are too low lead alike to dissatisfaction; for the worker will loaf to cover up the high rates or grumble at the amount of work he must do with the low rates; in both cases his sense of fairness is hurt.

I recall a factory where the labor turnover was abnormally high. The figures showed that just two departments were above normal; and they were so high as to affect the rate for the

whole plant. The men who quit those departments said without exception that they left because the foremen were fond of petty tyrannies. The foreman or superintendent who has risen from the ranks is always the hardest man to work for, and in these cases they had taken great delight in hazing men on the slightest offense.

These conditions had not been known to the management, and the result was that an extremely fair-minded owner had been blamed for injustices in which he had no part and which were quite foreign to his nature. When those foremen were removed, the labor turnover dropped, and consequently the costs of production. For it had been the high cost of production that had drawn attention to the labor turnover.

In another shop a department was abnormally low in its production, or, to put it another way, abnormally high in its cost. A study of conditions showed that the men were giving forth only a fraction of their effort and spent a deal of time in bickering among themselves. It developed that they were of several races, religions, and politics, and they carried these differences into the shop. The solution was to separate them into gangs of approximately similar

tastes; and by such a simple adjustment the production increased nearly fifty per cent.

I have given these cases only to demonstrate how much it matters whether the men are happy or dissatisfied—that a man is not simply a "hand," but a human being, and that it is money out of pocket to consider labor as a collection of individuals who can be hired and fired, jumbled together, or otherwise treated much the same as low-grade, non-perishable merchandise.

On the other hand, it is just about as wasteful to treat the workingman as if he were some especially fine merchandise, to be kept in showcases and carefully dusted from time to time—which seems to be the object of welfare work of the paternal order. A worker does not appreciate having his affairs ordered for him; that is a sacrifice of independence, and the result is harmful, no matter how good an employer's intentions may be. There should be no confusing of charity and business, and there need be none.

If we take medical inspection and clean, safe shops as simply good business, both from the standpoint of the compensation laws and of production, they are welcomed by the men. Increased educational facilities and the like are also welcomed, although it is an open question whether, except for special training, efforts in

this direction are not better made with the whole community rather than the company in view. But the "taking an interest" kind of welfare, the welfare work that presupposes that the laboring man is a fallen animal and should be uplifted, is everywhere productive of more harm than good; if it is not resented, it is because the working force has become docile. No live employer wants a time-serving, docile force. The will to cause trouble is exactly the will which, exerted constructively, makes for success.

In all of the above I have taken the worker as an impersonal being, or a personal being craving creature comforts alone, and the employer as representing capital and seeking to develop it by the hired services of the worker. I have taken that view because it is the usual one, and because it serves to illustrate that the real difference between employer and employee is in point of view. If they can have the same point of view they can both work for success in the same establishment and along exactly the same lines, and each receive the proper mental and financial nourishment for ambition. We can solve our problems by discarding money as the universal common denominator and replacing it with natural expression of instinctive desires—

that is, by bringing in a measure of democracy to replace autocracy.

Let me explain. I have found that workers can not be held at monotonous work which they do not understand; no amount of money will keep active-minded men for any length of time at such tasks if any opportunity elsewhere offers. And it is active-minded men who are needed. Under the German system the workers are mere automatons with direction from above. The repressive influences of this system are shown by the fact that the German nation has, since the system got under way, contributed practically no new ideas to manufacture or science. Germans have taken the initiative away from the many, put it among the few, and as a result their industries have generated no new thoughts. German practice, except in things military, has been taken from other countries. Germany simply dammed up the initiative of the people. Have our industrial processes been tending toward the same ideals—toward the submissive rather than the independent workman?

Every employer knows that he could not for long be prosperous if he repressed or had repressed every desire to put himself into his business. He does not care how long he works, if only he can have the satisfaction of seeing

his desires bear fruit. The workingman has exactly these same desires, and if they can not find expression in making his own job better, they will break out in some other form. The energy and brains that might as well go into business for the betterment of all may find a destructive outlet inside or outside the plant. The whole movement for democracy throughout the world is only an effort to express desires—desires that every one of us has in some form or other.

Directors of industry have two courses before them: they can fight the desire of the workingman for recognition and representation on an equal plane as a component part of industry, or they can all combine to hitch their desires in double harness and put into business the will and brain of every individual—for every individual has a will and brain even if long disuse makes him act as if he had none.

But is such expression practical? Employers are apt to think of the participation of workers in the control of industry as taking something away, simply because they are accustomed to think they must always make money at the expense of some one else. Yet it takes only a moment's thought to discover that profitable business is not built in such fashion, but by

making or selling something upon which others can make money, either through use or resale.

The view of selling as "sticking" somebody with something has passed out except among old-clothes dealers. Only a few business men have realized that the same rule holds true as well inside as outside of the shop, and that the most profitable manufacturing is that which reacts in like measure to the profit of all who are engaged in it.

Wages, for instance, are never absolutely high or low. They are high if they do not return a profit to him who pays them; they are low if they return too much profit. We know that a man who throws himself into his work as if he were doing it for himself is, given skill, a good investment at almost any price. Would not, then, the development of mutual work between employer and employee bring in so much talent now latent, and get rid of so much of the supervision now thought necessary as to insure profitable engagement for all the parties to industry?

Just as an illustration, the British Labor party insists in its platform upon the centralization and cheapening of electric power in order to eliminate the wastes of power. Imagine private owners asking for such monopolies! Yet

that is simply the thought of industrial engineering applied in a big way.

The management that now sets about giving thought in a big way to bringing out the possibilities of its plant and human resources is the only management that can survive. We are just entering upon our international career as an industrial nation, and in the world competition our employers can well begin to make plans for manufacturing upon a mutual basis with their employees—of organizing in such manner that injustice or curbing of legitimate expression is impossible. For it is to be remembered that, in any war between capital and labor, capital is bound to lose even if it gains a technical victory. Is it wise to invite such a war, when it can be avoided and both parties find themselves better off for their concessions?

CHAPTER II

SKILFUL MANAGEMENT VS. WELFARE WORK

THE commonest approach to the labor problem is from the social angle. One sees everywhere a quickening in the activities of those who always look at a human being as something to be morally and physically bettered, at whatever cost—and made happy according to rule. If the individual does not happen to attain happiness according to rule, that is only the perversity of the individual. Surrounding people with good influences, and all that sort of thing, gained a wonderful impetus during the war; for in the massed soldiery the uplifters had victims who could not get away: they might squirm, and the more degenerate might even curse, but they could not get away.

Welfare work had a large place in the government employment undertakings. The people must be taught to play, so the theory ran—and not infrequently they learned more about play than work. A strong trend has developed, through numerous amateur reconstruction com-

mittees, to attempt to develop a new social structure, based not at all upon giving each man what he is entitled to, but upon surrounding him, whether or no, with the comforts of life—to make him contented.

Somehow, I am reminded that the ideal factory organization, under this concept of labor organization, might be able proudly to paraphrase the well-known advertisement of "milk from contented cows."

The present thought in some quarters is that the great thing is to give a man a job and then keep him happy.

Jobs are not "given." Without an economic reason, they can not exist. Their existence depends, not upon the good will of the employer or the "happiness" of the employed, but upon the continuous output of a well-made product that the public buys. Hence, systems of employment bureaus do not solve anything. By making labor easily available they put a premium upon seasonal manufacture, and in that respect hinder the scientific development of commercial activity, while at the same time giving encouragement to the worker's *Wanderlust.*

If you adopt the German system of requiring workers to carry cards on which the employer writes the man's qualifications, and the reason

he left or was fired from a job, then you get somewhere in employment agencies—for then you can place men who are out of work for a good reason and not merely because they happen to want a trip. But so to stamp a man with his qualifications is wholly un-American. If you want to make employment agencies function, you must add to them the highly objectionable features of a black-list for bad employees and state supervision of bad employers.

In the same objectionable category fall the efforts to attain proper employment relations through employment departments which keep a record of the health of the workers, and see to it by periodical examinations that a fair average of health is maintained—sometimes by firing the unhealthy, or again by nursing them back to health. A statistical employment bureau in a plant is a great aid; it will show whether a department is having too great a labor turnover, and will thus prompt investigation; and it should also call attention to the real cost of hiring and firing men. But, essentially, such a bureau is a post-mortem affair: it does not prevent the disease.

A nearer approach to constructive work is the sorting of applicants in order to get them into the right jobs. But the job is more often at

fault than the man. One can not assume that the job is perfect and that the sole question is fitting the man to that job. Well-fitted harness does not make a good horse, although ill-fitting harness may lose the value of a good horse.

The handing of a sop to a worker is not a new idea. The present thought is often to dull his sensibilities by creature comforts. The older thought was cruder, although probably more efficacious: it took the ground that a man gave less trouble if he were continually soaked, just short of the saturation point, with liquor. Benjamin Franklin somewhere in his writings tells of how the printers with whom he worked had beer at such short intervals during the day that they were always slightly mellow and always (and this was more important, from the employer's view-point) in need of money for more drink. England would never have been able to pay the wages that obtained in her industrial districts had it not been that the people through drink lost all desire for better living. The newer welfare work seeks, under various specious guises, to dull pulsating individuality, not by drink, but by diversions of various sorts.

In the first chapter I touched upon these phases; but I am here again parading them because I want to bring out my point, that the

nice functioning of capital and labor is not at all a social but is instead a management problem. Efficient labor rests upon the stimulation of the creative faculty through proper work arrangements; efficient capital rests upon the stimulation of the reproductive faculty through proper planning. The efficient functioning of the two in unison rests upon the steady balance in adequate respective remunerations.

These matters are managerial and not at all social; they connote interdependence and not dependence. As soon as the interdependent relation is destroyed and either labor or capital becomes dependent the one on the other, then we have an eleemosynary condition which deadens. For instance, I shall show in Chapter IX that profit-sharing in its ordinary meaning is a *giving* and not a *sharing,* and hence it is not to be expected that it will produce the only results that are worth while in manufacturing for profit, or which have in them any permanency—the more economical engagement of work and labor, so that sales prices may be reduced and both capital and labor benefit.

The moneys that are spent in gifts, under the guise of profit-sharing, might better be spent in plant improvement or in method bettering, so that both the employees and the employer may

earn more. A stable condition is the result of unceasing progress in the way of better methodizing, and not in sitting down in a circle and dividing up what happens to be in hand.

"Reconstruction" threatens to become as repelling a word as "efficiency." Some one has well said: "The war has carried us to the depths; let us build from the depths." But in the building it is not necessary to abandon all that has gone before and to treat the past history of industry as a sheet from which the writing has been erased. We must subscribe either to a balanced relation between capital and labor or to some such creed as this:

"The capitalist mode of production is based upon the divorce of the majority of the people from the instruments of production. Society is thus divided into two opposite classes—the capitalist and his sleeping partners; and the working class, possessing nothing but its labor power. This social division widens with every advance in machinery; and while capital steadily accumulates into fewer hands, there is a constantly growing insecurity of livelihood for the majority of the wage-earners, and a steady physical and mental deterioration among the poverty-stricken of the population. Then develops the class war."

We must grant that the interests of the employer and the employed are opposite, just as the interests of the buyer and seller are opposite. But here in America we have long since got over the old idea that a sale is a matter of mutual recrimination. The seller no longer pleads his poverty in extenuation of his price, and neither does the buyer consider it essential to call in the aid of his pet anti-cheat deities. The larger the sale the easier it is to arrive at terms. Turning to the sphere of employment, one finds that very high-priced men are hired on a level plane; in fact, the very highest salaries are arranged and paid with the greatest of good feeling, although the salary in question (as wages in the bulk always do) may exceed the proprietor's own earnings from the enterprise. Why, then, must it be otherwise when the salary decreases into mere wage?

It need not be otherwise. Again taking a lesson from merchandising, we find that the most progressive sellers make it their business to see that their buyers make money out of what they buy—they try to make certain that there will be a mutuality of benefit, even if there can not be a mutuality of interest. The best sellers will go to any length, they will revamp all their

methods, to carry through the principle that lasting trade depends upon mutual benefit.

The salesman who "talks" any one into buying is no longer considered an asset; and the employer who hopes to get the most economical labor results by mere talking, and not by a policy of mutual benefit, will find himself without good labor as quickly as such a salesman will find himself without good customers.

The balance between the wages of capital and the wages of labor is not static, but is continually and rightfully in the direction of reducing the percentage wage and increasing the gross. The capitalist makes less per sale, but makes more sales; the worker makes less per article, but makes more articles. Such is the scientific method of conducting business. The other and more common method is to jack up wages and the selling price without any compensating efficiency—which starts the vicious circle of unrest by raising the cost of living and making whatever wages are paid unsatisfactory.

The longer-headed labor men have seen that wages can not be put up in real buying power if prices also go up, and W. L. George, in what he calls "Labor's Armistice Terms to the Rich," says:

"It is no use settling strikes by tricking us—namely, by raising prices equally with wages; our increases must come off profit."

And another has said:

"Save he serve, no man may rule."

Mr. George is something of a demagogue and is aiming at the eventual destruction of capital. The second quotation hits nearer the mark—that unless a real service be rendered, the employer-capitalist is not entitled to direct his capital. The service is to the worker and to the public, and, lest it be thought that I have got off the track and am heading in the direction of business as a philanthropy, let me say at once that it is in serving the worker and the public that capital finds its greatest and most enduring profits.

It is, then, the skilful manœuvering of capital that is back of the whole labor problem. Which is only another way of saying "management"—for management means much more than "ordering about." It means the exact relating of the various parts of a business, so that there is no waste of effort or money—that all of the effort and all of the money go into the product.

One is apt to take up labor as something that is apart from finance. There is no obvious connection between, say, the credit department and

the foundry. Yet, if the credit granting is too loose, the bad debt loss will be so high that salaries and wages all around must be depressed in order to meet competitors who do not have rosters of bad debts; or, again, the credits may be too tight and thereby business lost and the turnover of the capital slackened, which again finds its reflection in the costs of production. If the whole organization is planned to minimize the amount of capital represented by goods in process and to accelerate the period of turnover,—and such is the plan of scientific business,—then any department may be so slack as to cause the engagement of unnecessary working capital or the prolongation of the period of turnover.

I have many times found this principle of interrelation neglected because the head executive happened to have been trained in only one side of the business. If he has worked up from a salesman he may think that selling is the whole thing and regard the factory as a machine that grinds out articles for his people to sell; if he has been brought up on the factory side, he may regard the selling organization as a nuisance and insist that customers take, not what they may want, but what is easiest to manufacture.

Here is an instance of the salesman-executive type. I examined a certain plant, and was

struck by an atmosphere of extraordinary sloppiness and fitfulness. The workers used their hands and their feet, but apparently reserved their heads for purposes other than work. I noticed a cutting-off lathe running on heavy work. Near one end was a puddle of water and a broken oil-can, while scattered about were several burnt tools. The water pump was not in order, so the operator used the oil to prime it, but before he could get the cap back a quantity of water always spurted out on the floor. When the puddle of water got too big, he quit using the pump for a while and risked burning the tools—or cut down the speed.

It was discovered by a time study that the worker actually spent fifteen per cent. of his time fooling with the pump. Take fifteen per cent. of that man's wage, add the shop burden, and you will have a very fair annual sum.

In another part of the shop was a modern grinding-machine, but it was still in its crate, and had been there for five months, because, as the superintendent explained: "We keep only one man busy about half the time on that sort of work, and it is no use setting up the machine until more work comes along." There was either a loss of capital through the purchase of a useless tool, or a waste of labor in using a man a

half day or so on an operation that should take less than that time.

In another department, in a facing operation, it was found that the addition of an inexpensive jig would not only increase the output thirty-eight per cent., but would overcome a sheer waste of twenty-five per cent. of the forgings that were regularly spoiled in process through the faulty jig.

What was the cause of all this disorganization, which not only showed itself in bad work, but also in a high labor turnover and a general dissatisfaction with wages, to say nothing of the unnecessarily high production cost?

Executive personnel.

The president had started as a salesman, then had gone on to sales-manager, vice-president, and finally to chief executive. He knew nothing of fabrication, and intensely disliked being bothered with it; therefore he put in a buffer between himself and the factory in the person of an assistant who had also grown up through the sales force and who had the same ideas as his superior. He overruled the production department and insisted that sales orders rule. Economical runs were broken up to satisfy customers' whims for specials; orders were put aside that samples might be made, even though the

samples were not needed; materials were borrowed ruthlessly from nearly finished orders to rush something through for an especially favored customer, and often the original jobs were not completed for months.

Those executives had no appreciation at all of the value of good factory management. Hence they did not get good factory management, and of course they had a very large labor turnover and frequent strikes. Whenever a strike for higher wages or shorter hours came on, the president, without investigation into the merits, always showed a "firm hand." He railed at the perversity of the men, and swore that he would see the place ruined before he submitted to extortion. Then, as orders began to mount up and customers pressed for delivery, he grumbled with less fervor, and finally, when the pressure from the outside became unbearable, he called in the factory superintendent and told him to make the best compromise with the men that he could get. The president's strike procedure never varied. He always considered the wages excessive and the demands unjust, but he really never knew a single figure of the actual cost of wages. This man did not really have a labor problem at all—although he com-

plained that he had: his problem was purely personal.

Unfortunately, there are not a few such executives all over the world. Mr. J. H. Thomas, commenting on the English situation, said: "What has been the course of events during the recent strikes? Negotiations have taken place, then a rupture has occurred, a strike has followed, and immediately the workers have obtained all they asked. Either they were entitled to their demands before they struck, or they certainly were not entitled to them after the strike. You can not govern the country unless you are firm, and you have no right to be firm before you are just. These continual capitulations to brute force have resulted in the workers feeling that the only way to secure justice is to strike."

Take another case. A factory was crowded with orders, and the executives thought that they needed a large addition to capital in order to increase facilities. But they could not get the capital because their earnings were low. The workers were restless and wanted more money, which, in the state of the earnings, the executives did not see their way clear to grant. On examination of the factory, I discovered that the average capital turnover took eighty days.

This seemed excessive in view of the simplicity of the operations and the ease with which raw materials might be had. A careful system of planning, which included the elimination of useless stocks, reduced that turnover period to forty-five days. The company took on the new business and is now earning twice the former profit on the same capital and paying satisfactory wages. Yet if it had increased its capital it would probably have been wrecked by labor troubles.

Take still another case. A knitting-mill followed the usual custom of routing goods through the factory in case lots for customers. When a lot arrived at the finished-goods room, it could seldom be shipped because of the "rejects"; then special lots had to be sent through the mill to fill out the order. In the meantime the customer fumed and the firm lost the advantage of a quick turnover; incomplete orders often hung up thirty days in the shipping-room.

It was a simple matter to plan a stock-room program in accord with the size demands as shown by the records, and to fill orders on requisition from the stock-room. The production was planned according to those needs. That company's labor troubles were readily traceable to the needless loss in undelivered goods, which

made them imagine that higher wages were an impossibility.

I might give many more of these incidents, but the above will sufficiently demonstrate how inadequate is any treatment of the labor problem which assumes that it is something of itself and is not made up of the diversified activities of a business. The labor conditions may frequently arise from ineptness of management.

It requires some delicacy to approach this phase of labor, but there are times when the avoidance of facts is a disservice. Labor is primarily a management problem, and that business which is most scientifically run has the best foundation for building permanently flexible labor relations. Having the facts in hand, a bargain may be arrived at in which there is an equality of advantage. More inequalities arise from ignorance than from malice.

Going back to the respective payments of capital and labor, we know that capital in manufacturing is commonly paid only for what it does. (Except that where the material content of the finished product is high, capital sometimes receives an increment through the advance in price of materials, but it also stands the chance of losing by a decline in materials, and in the average business the two about stand off.)

Why not, then, pay labor its wage exclusively on what it earns?—in other words, pay exclusively on the basis of unit production?

We might pay on a time basis, with a specification of what must be done during that time; or on a piece basis, with a minimum of accomplishment. The time, in both cases, is a vital factor, for it is the time that the article takes in the shop which determines the amount of overhead cost that is absorbed.

But in industry the demand for the services of the worker depends upon the demand for the product, which means that the wage rate has an outside factor, not under the influence of either party, which may cause any wage to be unfair either to the worker or to the owner. The owner loses on the time rate when work is falling off, and the worker loses on the piece rate when he has not enough to keep him going through the whole day or week.

I never advocate in advance any particular method of payment, because, without knowing all of the facts in the case and making a complete study of conditions, it is quite impossible to say that this or that system of payment will produce the fairest results.

It is bad for an employer to have underpaid men; it is equally bad to have men who are

rushing through work in order to make a high piece score. But is there not some way in which the several advantages of these two modes may be combined, to the benefit of both employer and employee?

Good work involving the creative faculty can not be expected until a living wage is guaranteed. Straight piece rates do not guarantee a living wage. Is it not, then, approaching a solution first to pay a living wage, and to start the additional remuneration when a certain standard has been attained—to make the piece rates something that is superimposed upon the graduated living wage? And, further, is it going too far in the present thought that capital owes a duty to labor to guarantee that wage during good conduct?

Let us see. When machinery stops working, every possible care is taken to insure it against depreciation. The idle time is often used advantageously in making a thorough overhauling that will tend to prolong its life. No factory-owner ever stints on the lubricant for a fine machine: he would not let it go to rack and ruin just because it cost a little money to keep up repairs. But labor has been put in a different case. When it ceases to work—not because it does not desire to work, but because the man-

agement has not been skilled enough to provide work—it is supposed to care for itself and maintain its future ability to work as best it may. Cutting down the pay-roll because of lack of work is supposed to be a measure of economy, but it is often a most doubtful economy, for several reasons.

If the worker knows that as soon as his work is done he will be laid off, he will spin out that work to the greatest possible extent, piling up overhead charges on the owner; he will regard his mere presence in the shop as a reason for wages. If he is on piece rates, he will combine with his fellows, as in England, to raise rates and limit production. For if lengthening the work period means money in pocket to the worker, he will stretch out that work period by all methods; and it is entirely natural that he should.

And, finally, while a man is laid off how will he support his physical well-being unless his wages while working have been so high as to give a margin that will hold over the idle period?

I can state with confidence that the abuse of machinery, the waste of materials and power, and the various overhead charges that result from spinning out work in order to maintain a

full-time wage, would go a long way toward maintaining the extra wages bill that would accrue were he kept on the pay-roll during times of poor business. The remainder would be more than covered by the increased efficiency of the worker under conditions of security and plenty.

It is entirely reasonable, and in keeping with the wage system, to pay the worker for the quantity and quality of production. Quantity and quality do not connote profit, but if the disposing side of the business can not make a profit when it receives a sufficient quantity of good articles at a fair price, then something is wrong with the design or with the methods of disposal—and with neither of these phases has the worker anything at all to do. It is true that the worker, exercising his creative instinct, will undoubtedly suggest betterments of design; but usually these betterments go to facilitating production rather than to facilitating sales, for the worker can know the sales demand only by chance.

The exact method of payment must depend upon circumstances as long as the guaranteed minimum exists—and it is to be expected that in some cases the guaranteed minimum may have to be the standard union rate for the work.

The pay may be based on the work of the individual, or of the department, or of the productive section as a whole, according to the nature of the work and the size of the establishment. It may take the form of a bonus on quality, which is commonly far better than a bonus on production. It may go on the job basis—a fixed time being set for a certain task, which time is longer than a fairly good man should take, and then the premium calculated from the time saved. There are innumerable ways and means of arriving at a fair basis, but all of them have these principles in common:

(1) Extreme simplicity, so that the details may readily be understood by every worker; any element of doubt as to fairness (arising perhaps only from lack of understanding) will kill coöperation.

(2) It must be obvious that the reward is the result of effort and skill, and the reward must follow with such swiftness in its increase of earnings that the effort and the reward will be in effect synonymous. A remote reward kills sustained effort.

(3) The method must be thoroughly sold to the people; and if the method can not be sold

it is bad, no matter how many points of merit in it may appeal to the scientific mind.

(4) The initial rates should be fixed in conjunction with an elected committee of those affected, and the basis should be a scientific time study, every point of which is understood and approved by that committee.

(5) The initial rates should be regarded as experimental, and all rates should always be open to easy revision, by and with the approval of the committee on rates.

(6) The foremen or other officers directly in contact with the job should have nothing to do with rate-fixing or rate-changing, and complaints against rates should be handed to the committee and not to the foremen. The foremen are directors of work and not of wages.

An observance of the above principles will go far toward overcoming the chronic hostility to measuring pay by effort. That hostility arises either from unfair rates or from lack of knowledge of how the rates are arrived at. It is a hostility that is to be reckoned with, for a true balance between the wages of capital and the wages of labor is not to be had unless both sides are fair. Fairness is not a matter

of courtesy, but of equal opportunity to known facts. It is not without reason that almost every gathering of workers condemns effort payment; that nearly all trade unions are on record against the mode; that the first act of the Soldiers' and Workers' Committees, which sprang up all over Germany at the time of the revolution, was nearly always to pass laws prohibiting piece payment.

But the real objections are not at all to the mode. The workers object to the concrete application, and the application is commonly so objectionable that the mode itself is made the target. You will find any number of workmen who insist that scientific rate-fixing is only a device to wear out the worker for the benefit of the capitalist. The same sort of objection has met every effort to better manufacturing.

The application of power to weaving caused riots. Why? Because the workers believed that the mechanical devices would be used to take away what they thought to be their only source of livelihood. And it is a fact that many machines have been eagerly welcomed as devices to get ahead of the workers; scientific planning has undoubtedly been used at times for that very purpose. The worker's opposition is not without reason: he has a basis of justice

founded upon possible sporadic cases of injustice.

Words backed by facts cure injustice. Words backed by sentiment make it more smarting.

The worker is better off to-day than he was a century ago, because of the improvements in the methods of industry. He is not so well off as he should be, and *must be,* if industry is to progress. Is it not more reasonable to suppose that this betterment can be attained through learning to use what we already have? My own observation of industry teaches me that we are only on the threshold of industry as a science. To-day we are but opportunists in industry; we grab here and grab there, and success is measured by the amount that sticks to the grabbing fingers.

CHAPTER III

HAVE WE REACHED THE LIMIT OF WAGES?

STANDARDIZATION is good in its field. But in standardization lies the greatest danger to American business and prosperity; for, unless our standards are flexible and constantly open to proper revision, we may awake one fine morning to discover that we have standardized stupidly. You can not rigidly standardize intelligence—that is active—but you can easily standardize stupidity, for that is static. Business has standardized stupidity in dealing with those who work for wages.

Look at a few cases. I found one owner deeply troubled because he could not afford to pay as much a day to the gang on the receiving platform of his warehouse as a railroad near by was doing; and the railroad was taking the men. He employed thirty-three men at day rates, and, under conditions as they were, could not do with less; hence he could not increase the wage without putting it in the sales price.

Investigation disclosed that the laborers never walked faster than one and three quarter miles an hour, and that they spent a deal of time loafing while the foreman's back was turned. By putting the men on a piece-rate basis calculated at a three-mile-an-hour pace, this problem solved itself. The present gang numbers eighteen, and are so well paid that they stay on the job. The owner has saved money and the men are making money. But because that owner saw only one way of doing the work —the way honored by time—he could not see how wages might be bettered.

Here is another case. Custom had fixed the proper gangs for large concrete mixers, such as are used in road work, at twenty-one men. But the point that struck me was that the twenty-one men were not always doing the same kind of work. Sometimes there were three sand shovelers and again only two; there might be seven spreaders here and only five in another place.

A careful study of the various operations originated a plan by which the machine could be served by four less men without having any of them work a bit harder than before. The results were better than those obtained with the larger gang. A contractor with seventeen men

in a gang could certainly afford to pay better wages than the man who thought he had to have twenty-one. And I am not sure now that fewer than seventeen might not be used!

In both these cases the employer had settled in his own mind that he had to have a certain number of men on the job. When a wage problem arose, neither owner could think of anything but paying out more money to the same number of men for the same work that they did before. Why? They were intelligent employers, but they had standardized certain operations in their minds and thought the standards were inviolate. They had not thought of wages in terms of service, because they had become accustomed to thinking of wages only as money paid out and not as coöperative service returned.

Every one realizes after only a moment of thought that the real basis of wages is service rendered and that this service is measured by the price of the product. Suppose two men, each receiving two dollars a day, turn out together a product that sells for eight dollars. If one man can turn out that same product in a day he is worth at least four dollars. The decreased amount of overhead expense that he will accumulate, as against the two men, will

permit the owner to sell at less than eight dollars, and, thus increasing his sales, to make larger annual profits by speeding the turnover of capital.

This is the simplest possible demonstration that wages are profitably paid for service rather than for men, and that the wage limit is the value of the service. It is conclusive—but it is not accepted. Everywhere you hear employers and employees clamoring about the amount of wages—neither one likes the rates—with a pleasing disregard for the factor that eventually determines wages: the service to the public. Nowhere in business is blank stupidity so rigidly standardized as in wages. Take some of the controlling dogma of wage payment:

"I pay the market rate of wages; what more can I do?"

How many manufacturers have said that with conscious pride? I have heard some thousands make the statement. On its face it seems fair and sufficient. But is there a market rate for wages? The unions appear to agree with the employer that there is; they commonly differ on the quotation. The unions paradoxically declare that labor is not a commodity, and then go on to fix union rates as if labor were a commodity—as if the workers in a trade were as

alike as two pigs of iron. What is the market rate and who makes it?

The "market rate" is now only a cant phrase in merchandising. There is no market rate in commodities, in spite of market quotations. You find prices quoted for the staples, such as cotton, wheat, and the like; but when you go to buy for particular uses you discover that by paying more than the quoted rate you will get an especially good quality or brand which will save money in the end by being suited to your exact needs. The best purchasing agents seldom buy goods at the market price; they buy that which will give the best service—the largest return for the money without regard to the initial outlay. Price is neither a purchasing nor a sales argument among long-headed business men.

Suppose a salesman had this little talk: "I can offer you these goods at the market price; they are no better and no worse than my competitor's, and I can not do better than he does on delivery or credit terms. I have nothing to offer you that he has not. You get no advantage of any kind in buying from me, and I know no reason why you should buy from me."

How long would that salesman hold his job? Is there any conceivable reason for employing

such a man? And yet, how does that action differ from that of the employer who offers the market price to labor? Or the worker who offers himself for hire at the market price?

The whole trend of modern business is against making a product that will merely join the herd of similar products, and is toward making something that will stand out—something that will be different and better than the others. But wage methods have not caught up with merchandising, and they will not until the old ideas of master and servant are abandoned and business is considered as a democratic, mutual enterprise.

A delusion closely akin to the "market rate" is that somebody—some higher power—"fixes" wages, and hence the rate is something to rail at. Nobody fixes wages. They fix themselves through the cost of living. In times past they have been too low, and they are probably too low to-day, in spite of the fact that most employers think them outrageously high. The manual worker's wage has never given him a sufficient margin of surplus to support and educate a large family or to provide against his own old age.

It must be remembered that the working life of the manual laborer is comparatively short.

The bank president is in his prime at sixty, but at that age the worker is in his dotage. If it is right and just for the bank president to be able to retire with a competency at sixty, it is right and just for that manual worker, who is as efficient in his way as the banker, to be able to retire comfortably when he too reaches the age when his services are no longer salable. As it now stands, the aged worker commonly ends his days on the bounty of his children, or, in some countries, takes an old-age pension.

The wage surplus over living expenses to-day is, in some lines, considerable—especially in occupations of danger; but, on the average, wages have not much more than kept pace with the increased cost of living. It is the hope of the longer-headed leaders of labor constantly to hold advances due to increased cost of living, and then, by increased production, to lower the cost of living and consequently increase the wage-earner's net surplus.

Wages go up because of inflation or the excess of demand over supply, both of which reasons are closely related. They are always too high in war work, because that work is generally done in such a hurry and with so little planning that no facilities are offered for any one to earn a wage. In many plants the men spend a deal

of their time hunting for some one to tell them what to do.

The mushroom industries of war fade away, and with them the jobs at very excessive wages. The higher rate of war, with some adjustments, can quickly be converted into a low rate if the methods of production are changed to suit the wage instead of attempting to change the wage to suit the production. Of course, wages decline if production is inefficient—just as a man has no expense if he does no business—but that is not the direction of progress.

The men in this country who declaim most loudly against high wages are those whose manufacturing methods are most at fault—who are themselves backward. The man who has made the most noise in recent years about wages has the worst arranged and most wasteful shop I have ever seen. He is as stubborn in resisting improvements as he is in wages; I know that from bitter experience. He seems to hold that the end of industry is to promote strikes and not to produce marketable products.

The law of supply and demand—a law that operates around and above us—raises wages. They rise irregularly. It takes a little time for the cost of living to catch all wages, and in the meantime the worker gets a taste of economic

surplus. Then, when the cost of living does catch up, he wants another raise. And so the process goes merrily on until the particular demand that has caused all the disturbance ceases. Until then, wages and the cost of living chase themselves around in a circle. When the whistle blows to stop the game, some trades and localities are ahead of the high cost of living and others are behind. Then matters proceed to adjust themselves, but with most of the workers having somewhat improved their net standing. This is the way that the worker has risen from a mere serf to the status of a human being —with some small excursions into violence in an attempt to expedite matters.

Strikes never raise wages. If the wages are already high enough, the strike fails; if too low, it wins. But, in either case, it is some force outside that has really settled the matter. In the present day it is the union and not the individual worker that assumes the responsibility of holding the increases; but the only rate they can hold is that which can be paid by the least efficient manufacturer. Hence it is only the inefficient manufacturer who bewails the size of his pay-roll. The efficient employer should pray for wages so high that his less efficient competitor will go out of business.

Another current dogma is that any given product can afford to have only a certain amount of wage included in its cost, and that the wage must always be a fixed percentage of the sales price. Hences, if wages do go up, so do the sales prices. This dogma is common to both employer and employee; it finds expression in many ways. It does not take into account the service of a man; it holds that his service value is fixed and inviolate, and that there is something sacred about pre-war or pre-any other period wages and that we should revert to them with all speed.

Back in 1912 wages were considered too high. They have always been "too high." If we could find records of conversations among employers in the days when a wage of a penny a day was quite general, doubtless they would reveal a universal discontent over the extraordinary expense of labor! "It is simply unthinkable that a mere worker should earn seventy-five dollars a week," says the short-sighted modern employer.

The great objection of employees to piecework is that a fair rate will be changed simply because the superintendent declares: "Those fellows are making too much money." We find densely serious thinkers pronouncing that it is

not good for workers to earn too much money —they buy pianos and make all sorts of silly purchases! And all of this rests solely on the theory that there is a divinely ordained limit to the production that a dollar in wage can effect; which, in turn, has its foundation in the notion that we really know all that there is to be known about manufacturing, selling, and distributing.

As a matter of fact, any very successful business man will tell you that he has gone only far enough to realize that what he does not know infinitely transcends what he does know. I can say with entire confidence that not one out of every thousand manufacturers knows what relation wages have to the cost of the finished product. The manufacturer who does know his facts seldom talks about high wages. We can ascertain exact costs, but we do not yet know enough to fix the limit of a man's wage, for we do not know the capacity of the human being.

It quite often happens that salesmen are penalized by low commissions, workmen by low wages, and stockholders by passed dividends, simply because the executives do not know what they are doing, but unfortunately think that they know. Before it is possible to esti-

mate what wages can be paid, it is necessary to know costs in every department of a business, and in detail. I say advisedly "what wages can be paid," for in the world movement for democracy it is becoming more and more apparent that the owner must prove that he has a right to ownership by demonstrating that men working with him are better off than in individual enterprise. The question now is "how much" and not "how little" can be devoted to wages.

Take a case in point. My engineering staff examined a large manufacturing concern a few years ago, and discovered that the particular product they pushed, and on which they prided themselves, was sold at a loss. The only reason the company came out on the right side of the ledger at the end of the year was that some of the subsidiary products, which they sold reluctantly and only because they thought they had to, yielded handsome profits. How could that concern say that its wages were too high or too low, when it did not know the costs of what it offered for sale? Yet it was doing a gross business of many millions a year, had numerous branches, and was supposed to be one of the soundest companies in the trade.

An investigation in the paper trade some

years ago showed that, with practically all the factories paying the same wage scales, and buying their raw materials at about the same prices, the costs of completed stock varied widely. Some concerns were making money at rates that meant only losses for others. Although labor is not the greatest cost in paper-making, yet it is large enough to be a serious factor, and one would at first impression think that flat wage rates would have meant approximately uniform costs.

The first step in any wage consideration, and the first step toward the new idea in business, is to get the real values on wages. We all know that cheap labor is not cheap; paid cotton-pickers have proved cheaper than slaves—although it took a long time so to convince the South, because they never reckoned the expense of idle slaves. In any operation in which the material costs are high as compared with the labor costs, the highest possible pay is the cheapest if it results in savings of material, or in a fine product, or in both. In the grades of production where labor is the big factor, high wages are economical if the wastes of human power can be cut to a minimum. Wages are measured solely in terms of production. It is the part of the employer to see that facilities for production are

given, and then it is his right to demand that they be taken advantage of.

It is not what one pays a man that counts—it is what he does.

Before the war the sailors on the Great Lakes had higher wages than anywhere in the world, and yet the cost per ton mile of freight on the lakes was cheaper than anywhere in the world—because the boats and the docks were built to give the largest possible turnovers in cargoes.

Some manufacturers have sensed that the amount of wages is not an absolute figure, and they have installed bonus systems or other wage incentives. Sometimes these work and sometimes they do not. But if the premium does act as an incentive, then it is very common for the employer to cut the rate until it is just a bit higher than the elusive market rate. Or, again, the premium may not increase production.

I recall one firm that fixed a rate of one and one half cents a piece for all pieces over one hundred; the daily rate was three cents a piece on the standard of one hundred. The workers quickly saw that to earn a dollar after they had passed the hundred mark required just twice as much work as before, and they did not exert themselves. I suggested that they keep the rate

of three dollars for the first hundred, but pay six dollars a hundred for the excess. As a result the production increased thirty-five per cent.; and, although the rate was really higher, the men making an average of forty-one cents an hour as against a former thirty cents, the lessened overhead charge made a net decrease of five per cent. in the cost—and that without taking into account the lowering of labor turnover by gaining a better and more satisfied class of men.

Or again it may be that a little skill and foresight will cut out wastes that will absorb increased wages.

Take what would seem to be a small matter. The Government ordered certain classes of underwear to be baled instead of being packed in the usual wooden cases. The size of the burlap and paper was specified as thirty-six inches by fifty inches, in order that the coverings might be used again. There is quite a difference in the bulk of a bale of size thirty-fours as compared with a bale of forty-fours. The foreman of the packing-room found that the standard made a tight fit for the larger sizes, and he ordered all the burlap to be cut fifty-five inches long. The additional length was really needed for the large bales, but it was mere waste

on the smaller; by cutting the coverings in two sizes that five inches of burlap which had been wasted on part of the product saved twelve dollars and sixty cents a day, or three thousand, seven hundred and eighty dollars a year!

In every phase of the knitting industry the wastes are great because of the almost universal habit of cutting rates when an employee earns more than the foreman thinks should be earned. A girl who can earn sixteen dollars a week on a piece rate is far more valuable than one who can earn only twelve dollars, because of the less overhead that the speedier girl takes; but, commonly, an operator with the dexterity to turn out as much in five days as the average can in six will quit at Friday noon in order not to be a party to lowering rates. Thus, because of the dogma that a knitter should not earn more than a certain amount, the employee loses wages, the employer loses business, and the public pays too much for its knit goods.

A low piece rate, like a low wage, has the backfire of increased waste of material which often more than overcomes the saving in wages. I found that the rates in the galvanizing department of a large Eastern plant had been set with the thought that a man could make a fair day's pay only by forcing to the limit. The

workers did force, and they got production; but in order to make their quotas they pulled the pieces out of the galvanizing bath very quickly and with a thicker deposit of metal than was necessary. The best galvanizing is done rather slowly. We raised the rates twenty per cent.; the men took more time at their work, and the labor cost per piece was higher. But so much spelter was saved by the more careful dipping that the department cost the company twelve thousand dollars a year less than it had before. They saved money by eliminating the waste of hasty work.

I have taken the employer's usual approach to wages in an effort to show that wages are seldom what they seem to be, and one must have a very thorough and scientific knowledge of a business to be able to say that wages are high or low. The fact that they have repeatedly been raised does not mean that they are high, nor does the fact that they have been lowered mean that they are low. They are high if they do not return value; they are low, regardless of their total expression in dollars, if they do return value.

There is no reason in the world that a common worker should not make one hundred and fifty dollars a week—if he does that much work.

And it is the combined fault of the employer and the employee if he does not do that much work. But the fault of neither is chronic. If both regard a wage increase as something to add to cost, and not as a step toward cheapening the product, then the raise is wrong. Raising human costs to save eventual costs sounds paradoxical, but that is the trend of scientific industry, and marks the passage of the worker from slave to fellow-artisan and of the owner from blind to enlightened manufacturing.

That is not a fanciful progression; neither is it the opening for a homily on rigid scientific management. It is merely the result of human management in which both the employer and the employee take the view that their separate prosperities depend upon turning out a good product at a low cost.

It is really almost impossible to survey even the commonest operation without discovering that it is not only costing too much, but that no one is benefiting from the increased cost. The workers are not being paid as much as they should earn, the owner is paying too much, and the public is being mulcted in the final cost.

Three gangs of hand-truckers were working at a large Eastern factory. They were supposed to be working at the very limit, and fre-

quently put in overtime. Their wages were low because the work required no particular skill; it was generally supposed that a contemplated increase of business would require still another gang to be taken on. I offered a much higher rate, based on a study of the actual performance, provided that two gangs did all the work. The men turned to with a will, and two gangs are now not only attending to what the three gangs formerly did, but also have so increased their capacity as to absorb the increased volume.

They discovered for themselves that only one man is necessary to a truck where formerly they insisted that the hauling was really too much for two men! The workers are getting thirty-six per cent. more money than they did before, but the company is paying twenty-one and seven tenths per cent. less for the total service.

For the handling of metal under heat a company had always used squads of six men, each of whom performed a certain operation at fixed intervals. By a study of the job it seemed that four trained men were enough. By changing the old method of work (which simply involved having two men take three steps each), four men to a squad proved to be quite sufficient. The company saved forty-eight men a day, or thirty-

five thousand dollars a year, under the new formation—and this simply by using some of the capacity latent in the force.

In another factory, because the tools were inconveniently arranged, the employer was paying sixty per cent. of his total pay-roll for time spent in moving about to get things. He thought that he was hiring men for work; he was in fact paying for pedestrian endurance. And everybody lost on the deal.

I have cited these cases, and I might cite many more, merely to show that the important thing is not the wage paid but the return on wages, and that the return on wages is not an absolute figure but depends upon how the individuals grasp the job on hand. Neither employer nor employee can get the maximum service unless the minds of both are centered upon the single object of service instead of upon the nearest dollar.

Nearly everything depends upon the approach and the amount that the individual has to say about his own placing. If any management attempts to effect savings in which it alone will benefit, it will and ought to fail. The reason that many plans involving personnel reductions fail is that the employer tries to reap the whole benefit.

The master commonly approaches labor-saving with the thought that thereby he can get the better of the workmen—in fact, this is the strongest argument an industrial engineer can offer. The worker sees in doing the work with fewer men the figure of the grasping employer-capitalist trying to squeeze out more money. Both the worker and the owner imagine that there is only so much business in the whole world. The worker wants to spread the business thin, so that he can always have a job; the owner wants to get all of that business for himself by brute force. Neither recognizes that bettering service creates buyers, or, to put it another way, that every wage increase which is not added to the cost of production brings into play a new purchasing power that flows through every channel of business. When a maker of locomotives finds a way to make them cheaper by paying higher wages, he at once sets in motion an added demand for goods which eventually makes the railroads buy more locomotives.

The interests of the employer and the worker are really mutual, and it is the part of the employer to make that fact known in more than words. It is quite useless for him to talk about mutual interest and then take no steps to study how that interest can be cultivated. It is not

showing an interest in employees toploftily to raise wages and then add them to the price of the product; that is only a prelude to eventually reduced business.

The only way in which mutuality can be established is to take the workers into actual confidence and conference through their own elected agents. Give to them a part in the management of the affairs in which they are most intimately concerned—hours, wages, and conditions of work. We all know that driving will not attain the same results as leading. You can force a man to work hard because he needs the money, but you can not thus give him a fellow interest with you. You may make a dog pull a cart by dangling a bit of meat always before his nose—but that dog will not perforce love either you or the cart. If he is a regular dog, he will shake himself and "light out" the moment after he swallows the meat.

But how are you going to persuade a man to work with you if his union says that a certain number of men are necessary for a job, and that it must be done in only one way, and that no man shall be permitted to turn out more than a fixed amount within a stated period? The unions are wrong in stifling better methods of work; they are wrong in putting the so-called

anti-efficiency laws through in many states.

Thomas A. Edison was quite right when he said, "The worst enemy of the worker is an inefficiently run shop." But the unions have a measure of right in their fears: they know that the employer is not always after better methods for the benefit of either the worker or the public. He wants increased returns; and, because he will not express the increased efficiency in lower prices to the public and higher wages to the men, the unions know that thereby no additional markets are created and that the economies really do mean less work for the wage-earner. They are no more and no less short-sighted than the employer.

A mutuality of effort is attainable. Once attained, the reason for the opposition of the worker is removed, and then wages may be based upon the service rendered and the value of that service can be measured according to the respective contributions of the employer and the employee, and a balance struck satisfactory to each. This involves not so much a reorganization of business as a change of mind regarding the objects of business. When the worker can help fix his own limit on wages, he will have a measure of joint proprietorship. The cure for irresponsibility is more, not less, responsibility.

When a man works for himself, the only limit to his remuneration is his ability. That same principle can be applied in large business.

And if any one thinks that it is not worth while to talk seriously about wages and that things will shortly be going along in the same old way, with more workers than work, let him reflect upon these three facts:

(1) When all the present workers are redistributed, we shall have barely enough to man industry.

(2) We shall not receive great yearly drafts of foreigners, who before the war made the supply adequate.

(3) As industry increases—and it must—we shall need more men, and we have nowhere from which to draw them.

CHAPTER IV

HARNESSING THE CREATIVE INSTINCT

ALMOST invariably I have found that when in plant management the emphasis is put upon quality production, the quantity also rises, but that when the request is only for quantity, the quality decreases. There are, of course, exceptions, as to any rule; but it is a curious fact that the average workman, being pressed solely for quality, will commonly attain a larger production than when he is pressed solely for quantity. I say this is a curious fact. It is so only on first impression.

One would imagine that a man, being spurred on to attain a certain output and devoting himself entirely to output, would naturally do more work than if he were asked, not to attain any certain output, but to give himself up wholly to the making of perfect articles. This first impression, however, neglects to take into consideration that human trait which is of supreme importance not only in industry but also

throughout the entirety of life—the creative instinct.

"Creative instinct" has a formidably erudite sound. It brings to mind an impractical discussion of psychological traits, and seems to lead away from the brass tacks that make up the business of profit. But it is by recognizing human reactions that we can develop industrial relations. The modern factory-owner considers himself ill equipped if he has not a laboratory in which experts study the properties of materials. An automobile manufacturer would not think of using steel without a most exhaustive study of what that steel would do under any and all circumstances. Why, then, should the study of human reactions be considered out of place in industry?

Is it not merely for the same reason that caused the staid and conservative manufacturer of a couple of decades ago to dub all laboratory experimentation as sheer tomfoolery? The staid and conservative manufacturer installed laboratories and testing processes when he found that the less staid and conservative manufacturer who had all these things was getting the business. The factory-owner who to-day refuses to take into account that there is in his business a human element worthy of the closest

study will shortly find himself in exactly the condition of the man who declared that investigation of the properties of materials was rot.

We have gone far in the study of materials. We have progressed enough to have an inkling of how small our actual knowledge is, as compared with the knowledge that we may some day have. But where the man is concerned our absolute knowledge is practically *nil*, and consequently industry is to-day lop-sided. Mechanical engineering, for instance, gives but little attention to the fact that machines and materials are used by men. Industrial engineering does recognize that men are a not unnecessary portion of factory equipment; but its narrower aim has been to make the men just as much like machines as possible.

We would not think of making a casting without a profound knowledge of how the metal was going to act in the mold and afterward; but every day we make industrial molds with only the most casual attention to what is going to happen to the human being when we attempt to pour the man into them. The trouble is that the human being usually will pour. If there is a sufficient supply of what we are pleased to call labor, there are precious few arrangements

that are too obnoxious for the man who, at the moment, desperately needs a job. But there is an antipodal distinction between filling a factory with men and getting a working force.

Sometimes, while watching the river of employees bubbling through the large modern industrial institution, one might imagine that industrial requirements were satisfied by keeping a steady flow of men *through* every job in every department. During the period of war work one might well have likened the procession of workers to some vast pilgrimage, pausing for a moment or two at shrines represented by factories. As far as the shipyards and powder plants were concerned, the workers simply came right in, turned around, and walked right out again.

It is easy to put all this shifting and changing down to human perversity—to term it a mad scramble for the dollar, and say that it is perfectly natural that the scramble should be thickest where there are most dollars. That is the superficial, unthinking view. Job-changing is unnatural; the normal man likes to be interested in something.

The workman who will loaf with consummate skill during the day may, at night, work very hard upon a doll's house for his little girl, lav-

ishing upon it all the tender care of craftsmanship. He has no interest in his daily task, but he has a deep interest in the home job that he has set for himself. Is this the fault of the man or of the job? Why should he be interested in one and not in the other? Both are work, and the second will not bring a financial reward.

The difference is that in the factory job he probably does not know what he is doing; he is simply going through a monotonous routine and doing certain work because he is told to do it, and without an idea of just what part he plays in the final product, what his relative importance is, or what is the value of that with which he is working. He has no measure of personal responsibility in the factory as high as that of the machine he operates. There is nothing to draw out of him the natural and fundamental instinct of creation.

But when he is building the doll's house the situation is different. He is making something of his own. It will reflect credit or discredit upon him, according to the skill that he puts into it. He knows the cost of everything that enters, because the money for the material comes out of his own pocket. He will spend whatever is necessary to achieve the result that

he desires—but not a penny more. He is fulfilling the ideal of creative work.

In our ignorance of the importance of the human element in industry, we have thought that we might substitute something for this creative instinct—something made of metal and propelled by power. We have evolved machines that are infinitely more accurate than the human hand, and some of them are so nearly automatic as seemingly to be attended with a minimum of human skill.

We have come to think of them as machines rather than as enlarged tools, and to forget that, no matter how perfect a machine may be, it will not turn out a perfect product unless fed with the right material, kept in order, and operated at the correct speed. The most highly automatic machine is no better than a dull chisel in the hands of a carpenter, unless the operator feels that he is the master of that machine—that it is his tool, and that it will do as his skill directs. If he has the sense of mastery, he can not take the attitude that it is no business of his how the machine is working, and this finds its immediate reflection in the reduction of idle machine hours, repair costs, and spoiled merchandise.

In one mill I recall that the spinning-jennys

were idle as much as fifteen per cent. of the time, simply because the whole responsibility for the operation of the department had been put upon the shoulders of the foreman, and he had so many other things to do that he had neglected to keep the automatic stops in repair. Putting and keeping the machine in repair, on the responsibility of the operator, decreased the idle time to seven per cent. and increased production eight per cent.—without taking into account the saving on goods through the elimination of rejects.

In a factory making automobile parts the idle machine hours amounted to thirty-six per cent. on certain machines, which were the "neck of the bottle" in the production scheme.

Before I investigated conditions here, the owners had planned to increase the number. An analysis of the idle time showed that fourteen per cent. of it was due to changing dies, ten per cent. to material shortages, seven per cent. to breakdowns, three per cent. to labor shortage, and two per cent. to miscellaneous items.

Those machines had not been used as tools. The men had simply let the machines operate as such until a particular job was finished, and then they shut them down and changed dies for the new job. It is but a slight exaggeration of the

real situation to say that the foremen and workers *attended* the machines.

The change was very simple. It involved merely a change in view-point—considering the machine in relation to the work, which meant providing dies and material beforehand and seeing that they were ready when needed. This is the prevision of the master of the machine, as opposed to the machine as the master.

In this particular instance the suggestion of mastery came from above, by the way of an industrial engineer; but the reason that a perfectly obvious change had not been made from below was that none of the people in the department had any idea of their own relation to the entire process of production—they merely went through the motions that the machines asked of them.

No matter how close is the supervision of machines from above, the best results can not be had unless the men below also supervise. Complete and efficacious supervision springs from below. A man expending true creative forces supervises himself; therefore, is not the best of all supervision that which stimulates these creative forces?

The instinct to create is only one out of many that go to make up a human being, and if we

are to have the real coöperation—not merely the services—of a whole human being, the conditions of work plainly must be such as to satisfy, in so far as possible, these instincts.

Translating this into material phraseology, the best realization of the human being is to be had only when his composition is taken into account, just as the laboratory teaches us that the finest properties of special steels are to be advantaged only when care is taken to avoid certain practices in fabrication. It was thought that anthracite coal would not burn until an accident demonstrated that the trouble was not with the hard coal but with treating it as soft coal.

When you analyze the success of certain employers in dealing with their people, you will be struck with the fact that they unwittingly, through innate knowledge of human nature, satisfy the instincts of workers. Other employers, without this personal quality, can not gain labor harmony.

What are the instincts, and how are they to be satisfied? If industry satisfies or provides the means for the satisfaction of the instincts, it is bound to be successful. Otherwise it can not be.

The first instinct is to preserve family and

self, and this is expressed in the demand for at least a living wage. Wages are by no means the solution of industrial troubles, but without living wages there can be nothing else than trouble. Wages come first, but not in the sense that anything can be bought at a price. Loyal service can not be bought. The wage that I have in mind is a base wage and is calculated on the cost of living.

The parental instinct is a very powerful one. The men and women who will not first of all care for their children form such a small percentage of mankind that they need not be considered in any general discussion. When the high cost of living rises the family is threatened with destruction, and naturally the proper sort of parent, who is also the proper sort of workman, must have his wages increased to meet the decrease in the purchasing power of the dollar.

After passing the point of sustenance, the worker, just as does every one else, wants something of the good things of life. Below that point, however, nothing can be expected in the way of work and coöperation; for when the struggle for mere existence is uppermost there can be no time to think of work other than as so many dollars.

The argument for a living wage is unanswer-

able, and it is quite useless to discuss industrial relations unless the minimum wage that a man or woman can earn is enough to support life in a degree of comfort; if that wage is not paid the discussion of relations properly belongs to the psychology of slavery.

The living wage is measured, not by the amount paid in any one week, but by the amount paid throughout the year; for the worker, it may be remarked, can not go into winter quarters, like a bear, and live on nothing for a few months. Therefore the payment of a living wage—the satisfaction of the instinct for mere self-preservation—at once involves the year's planning by the employer.

It is the custom in many factories to regard production as purely seasonal and to expect to shut down through at least a small part of the year. Why, then, should the owners of these factories be surprised when their workers ask for large wages during the busy periods? They would be quite without economic sense if they did not; for, even if the employer considers it no business of his how the men get through the slack period, it is most emphatically the business of the men themselves.

Most of the demands made by workmen for excessive wages during the war period was due

to the idea, everywhere current, that the work was of short duration and that after the war there would be no work for anybody. Owners calculated their own prices on that basis, but they were amazed when the employees did likewise.

The matter of twelve months' outlet for production is an essential in well-regulated industry, and forms a part of the living wage preliminary. In a later chapter I discuss the ways and means of obtaining such production and give concrete examples; but here it is enough to say that I have yet to see the business that can not either be continued through the whole year, or be organized to take on another seasonal product, so that the full force can be used through the whole year.

After having fixed the living wage as a minimum, we come into the field of remuneration where the creative instinct can be spurred on to make more and more money for the three parties to industry—the employer, the employee, and the public. It is here that the fitness of the man can be recognized. Contrary to general belief, this is not opposed to the tenets of the unions, which some think are committed to equal pay regardless of ability.

Before a recent meeting of the Labor Adjust-

men Board a union representative was asked: "Do you feel that pay or wages should be dependent in any way upon the fitness of the man who gets the wages?"

Answered the union officer: "Above the minimum I do. I believe the union should establish a minimum wage, according to the circumstances of living; but it is entirely optional with the employer to grade his men according to their value above that scale."

We can, then, take it as settled fact that one need not waste time searching for better work, or for coöperation, or for any of the things that go to make relations in industry better, unless the base wage—the wage that any one who is willing to work can earn—at least covers the cost of living through the full year.

And, naturally, this involves hiring and firing. Indiscriminate firing for petty causes by angry foremen will undo the best of policies promulgated by the management, for the effect is precisely the same as laying off men because of seasonal production. I have found that many demands for what seemed to be exorbitant wages rested solely upon the fact that the foremen thought it was good discipline to put the "fear of God" into them by frequent and abusive firing. In one large plant where the production

of a department had fallen, an investigation showed that the tactics of the foreman were wholly responsible: he had considered it part of his duty to fire a man or two each day, whether or not an offense had been committed.

It will have been apparent by this time that the foundation upon which the instincts of good workmanship rest is made up largely of things that the workers themselves are in the best position to supply. The single point that is exclusively for the management is the provision of work the year round. In the other affairs the workers are in a position to satisfy themselves as none others can.

It is for these reasons that a measure of self-government in a factory produces results that seem out of all proportion in the comparatively few changes which such government really brings. One man who has experimented with forms of self-government in factories through many years goes so far as to state these four propositions:

"(1) That wages alone are not enough to hold men and to induce them to do their best work.

"(2) That, in addition to wages sufficiently large to permit workers to live comfortably,

they must have some interest in the work apart from the money return—a pride of product, something akin to the old pride of craftsmanship. They must have ideals.

"(3) That these ideals and consequent interest may be created by giving to the workers a share in the government of the factory, in so far as it touches themselves, and ample political machinery managed by them to insure a universal 'square deal'—that is, they must create for themselves under supervision a kind of industrial democracy.

"(4) That work interest can not be had under mere quantity production, because that is of itself destructive of ideals. Quality must come first. Then quantity will care for itself."

Sidney Webb, the English authority upon many industrial matters, has this to say along the same lines (he is speaking of English industry):

"You must not dream of taking a single step in the direction of scientific management until it has been very elaborately explained to, and discussed by, not only the particular men with whom you are going to experiment, but also by the whole workshop. It will, if you handle it

with any competence, be a matter of intense interest to them.

"You must talk to them both publicly and privately, with magic-lantern slides and experimental demonstrations, answering endless questions and patiently meeting what seem to you frivolous objections. The workshop committee or the shop stewards will naturally be the first people to be consulted.

"Remember, it is the men's working lives (not your own life) that you are proposing to alter, and their craft (not yours) that you may seem to be going to destroy. You will be making a ruinous blunder, fatal to the maximum efficiency of the works, if you content yourself with bribing, by high rates, bonuses, or rewards, just the few individual men whom you propose to put on the new system, whilst leaving the opinion of the rest of the staff sullenly adverse. The others will not be appeased merely by the fact that a few selected men are making 'good money'!

"And you must, of course, make it clear in some way, to your own men as well as to the trade-union concerned, that what you are proposing to introduce will not merely pay the first lot of selected workmen, and not merely the

present generation, but also will have a good influence on the prospects of the whole staff, and will not have any adverse effect on the standard rate, now or hereafter. Unless you can demonstrate this—unless you in some way automatically protect the piece-work rates from being 'cut' *at some future time*—possibly by some future manager—you will be met (and in the national interest you ought to be met) with unrelenting opposition; and, if you impose the change by force or by individual bribery, you will inevitably encounter the reprisals of 'ca'-canny.' ''[1]

Shop representation goes into many phases of industry other than wages, and, in fact, after the first few meetings wages form an unimportant part of the business of the meetings because of the feeling that the wages as paid are just or the representatives would recommend changes. Frequently, when an employer pays a bonus or raises wages, he only serves to prove to the men what they had already thought: "The old man could have paid higher wages long ago, and he's been skinnin' us all this time."

[1] *Ca'canny:* A word, probably of Scotch derivation, used to denote what is sometimes called "the strike on the job," or the "silent strike."

But it is different when the workers get the facts for themselves. Therefore, taking my own experience and the experience of many others as a guide, I can say that the question of base living wages can seldom be settled by the employer alone; for, no matter what wage he pays, it will seem small to men who regard him, rightly or wrongly, as profiteering out of their services. One may rail about the injustice of such views, but is it not far more sensible to accept the facts and apply a remedy based on what is, instead of on what you think ought to be?

In representation are satisfied the instincts of self-preservation, of possession, and of assertiveness; and all of these find expression in more intelligent work, and in that attitude of working *with,* which is so powerful, when attained, that the organization which has it can do almost anything. All of these things combine to make the employee feel that the work is *his* work and that out of it he will get the benefit he deserves in the degree that he deserves.

But the employer instantly rejoins: "Is not my business mine, to do with as I like? If I give representation, do I not in effect say that people who have nothing at stake can run it for me?"

In the bigger view no business is a personal asset to do with as one likes. But that is beside the question, for what we are now considering is making business a success. It is the right of every man to ruin his fortunes if he likes. But it is not my thought to help in that process.

CHAPTER V

MAKING THE WORKMAN PROUD OF HIS JOB

THE creative instinct—which makes work a pleasure—is by no means dead in American industry. But, except in a few plants, it exists rather by accident than by design, because the idea that there is such a thing as the instinct to create is laughed away as impractical by many plant managers. Most of us are very backward in the study of the human equation, and therefore don't realize that by stimulating the creative instinct we can solve, to a great degree, the so-called labor problem.

Take the accidental development. A large saw-works in this country prides itself upon the quality of its saws. The business ideals have come down from father to son through about a century; they would rather shut up shop than make an imperfect saw. The founder was an expert saw-maker, and his ideals have lived through the generations. All of his direct descendants are saw-makers. With one exception, the company has never had an officer out of

the family, and every one of the officers has served an apprenticeship of from five to ten years in the shops—and this in spite of the fact that to-day the family fortunes run into the millions.

That company has practically no casual workers and no labor turnover. Just as son succeeds father in management, so son succeeds father in the shops. You can find three generations of the same family in that shop. They are proud to work there.

But this company has none of the modern ideas of labor management. They have no labor experts, no welfare work, and they do not pay as high wages as many other shops. Why, then, are these jobs so sought after? Why is there no department for hiring and firing? Why should the fact of a man leaving (and they employ about thirty-five hundred men) be so notable as to demand the personal attention of the president?

Simply because there has been developed a pride in work which holds the interest: those men want to make good saws, and they consider the making of good saws as the biggest thing they can do. If a saw is turned back on final inspection, they want to know why—for that is a reflection upon their ability as saw-makers.

They are treated fairly and paid fairly; they know that is so, because most of them *know* the officers and call them by the first name, because they have worked in the same shop and possibly at the same bench. There has never been a strike. When the war drove up prices, the company increased wages according to the increase in the cost of living, and did so without being asked. It pays through fifty-two weeks in the year.

When a man gets into trouble, some member of the company will probably hunt him up and offer him what money he needs—on a purely personal basis, just as any other friend who happened to be in funds would do. There is no investigation, no note-signing. When a man gets too old to work, he retires on a pension or takes a supernumerary job about the place. There is no pension system and no formality; everything is done in a matter-of-fact way without the company taking pains to show that it is a good employer or the employee feeling that he is getting anything more than he deserves.

Of course, this ideal situation is not to be achieved by the ordinary company, which has not the years of traditions and the continuity of management behind it; but if we reduce the case

to its elements, these personal factors are not quite so important as at first they seem to be. Others may consciously put into practice just as successfully the principles that in the saw-works more or less unconsciously came into being. Look at these principles in the light of what we know of the psychology of the workers:

(1) The workers are relieved of economic fear by being paid the year round; they are advanced on merit and retired on pension at the end of their working days.

(2) The wages they receive are neither high nor low, but are on a fair basis of performance; likewise, the working conditions are above the average, but not in any way what might be called "fancy." The men are satisfied with both wages and working conditions because they have the individual right to go straight to the officers if the wages do not satisfy them and to talk over amounts on a man-to-man basis. They are content with working conditions because they have seen the owners and the sons of the owners working for years under exactly the same conditions.

(3) The wages and the conditions of work being disposed of, they are free to exert creative effort. They must exhibit craftsmanship, and

they do exhibit it: First, because they share the company standard that bad work is a disgrace. Second, because they have all been trained through every department of the works, and, although the task they finally remain at is a repetitive one, they know the exact relation of what they do to the quality of the finished saw. Third, because of their familiarity with the whole institution and the interchange between them and the owners, they know the cost of the material with which they work and hence do not waste it.

Such are the elements of good work generally, and they are not peculiar to individuals or impossible of attainment in any factory or office, if only they are borne in mind and the organization directed toward their achievement. Conversely, the elements of bad work are:

(1) A sense of economic insecurity—low or high, unsteady wages, and frequent firing.

(2) Arbitrary setting of wages and imposing of penalties. It makes little difference in result whether the arbitrary actions are just or unjust.

(3) Lack of a standard of product.

(4) Lack of knowledge of the place, and the

effect of the particular operation in the whole scheme of fabrication.

(5) Lack of knowledge of the cost of the material that is being used.

In the factory with intricate subdivision of labor and standardization of operations (and it is, as a rule, in such factories that labor turnover is the highest) one seldom finds the least recognition of the above principles, and therefore it is not surprising that the workers come to think of their jobs as a kind of servitude, to be borne only until freedom is offered.

An officer of one of the international unions has this to say of his own experience:

"Is it not true that the industrial evolution which has brought the trusts into existence has been the means of eliminating the 'human touch' in industry? During the days of small industrial plants, the employer and the employee, of course, were really fellow workmen. At the present time, however, the employee has perhaps never seen any of the stockholders of the industrial plant where he is employed. . . .

"When I worked in the factories, which I did from the age of twelve to twenty-five, one of the things I found the most dissatisfaction with was the deadening sameness of the work. I never

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remember a time, when working in the factories, that I became so interested in my work that I did not long for quitting time to come. After leaving factory work I got a job with a building contractor. As I became more proficient as a carpenter, I have time and again been put doing certain work that was more or less creative, in which I became so interested that I paid no attention to quitting time and have worked for two or three hours after the time when I might have quit work. There is joy in creative work."

That letter was written to Mr. R. B. Wolf, who has made a very extensive study of the creative faculty of men. In a paper read before the meeting of the A. S. M. E. in December, 1918, he gave these conclusions:

"Production means creation, and the industrial creative function in man is a mental process and lies in his intelligent adaptation of means to ends. It is useless, therefore, to look for real creative work unless the workman has a chance to think and to plan; any other working environment either fails to attract or actually repels the workman, and, as a consequence, offers no incentive to increased effort. Work which does not call for thoughtful reflection and which uses only muscular effort tends to draw man down to the level of the brute and

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makes for industrial irresponsibility and consequent social disorganzation. The unthinking man can not be a responsible man."

The distinguished investigator, Helen Marot, in her book upon creative work says: "All productive force is artificially sustained which is not dependent on men's desire to do creative work."

Look into your own case. Most of us have at one time or another had work to do that did not require creative effort. Perhaps you will think of motions repeated over and over in a gymnasium, or perhaps you will think back to the day when you had a cord or two of wood to saw. A task to be done that calls forth no ingenuity, simply muscular effort, is never interesting. It is done if it must be, but quitting time is always welcome.

In other words, men are listless and indifferent—leaving when and as they like—only because the work holds no interest for them; it is not theirs and they have no part in it. How, then, can they be given an interest?

First, they can not be given an interest through any set of tricks or superficial improvements. A bird in a gilded cage is just as unhappy as a bird in a rusty cage. That is why welfare work so often fails.

That which is fundamental is absolute straightforwardness in every relation between the owner's representatives and the employees. The slightest suspicion that they are being "handed something soft" destroys the atmosphere of mutual purpose without which work can not be interesting. The pay must be adequate; that I have already touched upon and will take up more fully farther on. And, finally, it is necessary that the company itself should have a pride of product, with standards that are insisted upon. Without work-pride at the top, there can be none at the bottom.

With such an approach, it is easy to interest the employees by giving them a measure of autonomy in such matters as affect them—wages, hours, inspections, conditions of work, and all penalties. This may be done in several ways, and is best accomplished a step at a time. The best plan is to be arrived at only by close study, and it would be most unwise to adopt anything in the nature of a system or to stand or fall upon the results of a completely arranged plan. Human relations are fluid, and they are not to be regulated by hard-and-fast plans.

In some instances an association of the employees, with an elected president and officers, has been most successful in settling all disputes

and promoting order and company spirit. A somewhat simpler method is the shop committee, elected by the workers to act as representatives to the company and to hear and decide all disputes. Another plan which has had great success is to organize the workers on the lines of the United States Government: the executive officers become the Cabinet, the foreman and department heads are the Senate, and the House of Representatives is elected by the workers according to departments.

In all of these plans the meetings are held during work hours and on company time. Any plans that provide for meetings outside of company time usually fail, for workers are not yet trained to the point where they will give up leisure to the consideration of company business. Probably at some later stage of development this will come about, for the men will not then distinguish between their own and the company's time; but, since we are dealing with facts and not with untried ideas, we must face them.

The time spent, however, is far from lost. Judging by results, most employers could afford to pay triple rates for the good accomplished by the men at these meetings. In them they discover what the company is aiming at, what are the trials and what the rewards. In short,

they become in a way co-managers, and with responsibility naturally comes knowledge; they partake of the ideals, and spread those ideals to their fellows. If the employer does not happen to have ideals—why, that is another matter.

Having a constructive end in view, the work takes on a different character—it becomes something to be done well and not something to spin out for the money that is in it. The men are anxious to know the best way to do their work; every artisan is anxious to improve himself—the number who attend night schools or take correspondence courses proves that. When improvements in ways and means are suggested for the discussion of their representatives, then that which is called "scientific management" takes on a new aspect. Usually it is not scientific; it becomes truly scientific when it works with and by the individual.

In one shop in the Middle West where there is a large measure of self-government, the employees voted to retain an expert, and later they posted a sign announcing that they were all "efficiency engineers" themselves! Acting on that principle, they have each studied their job in the light of the best practice; and as a result that factory, with an actual decrease in the number of men working and without additions to

equipment, has more than doubled its output.

Boys and men will spend hours in the study and practice of new formations and tricks in baseball and football because they have the will to win; they will do exactly the same thing in the shop if they have the will to succeed, and will welcome the industrial engineer with all the eagerness that a college team welcomes its football coach.

They find interest in new methods. There are few more engrossing studies than the time and manner of motions. I have seldom met with a workman who, knowing what it was all about, did not have intelligent pointers to offer while he followed the timing operations; but to the worker who does not understand, and who feels that his best interests are opposed to those of the management, a time study is but the measurement for a uniform in which to bury his individuality, and he puts a decided "reverse English" on his coöperation.

There is no mystery in a time study: it is made for the purpose of discovering which motions are essential and which are not. In the long run the worker and the manufacturer are paid only for essential motions; these are the only ones that result in production. Unessential motions show some day in the company bal-

ance sheet, just as padded expense accounts some day show in the salesman's record; there is no dodging them. Waste always shows up in the end.

The ideal industrial management situation is one in which the outsider comes in only to give a newer viewpoint and to teach from out of his broader experience. His object should be to teach, and when he goes he should be able to leave behind him pupils who are fit to teach others. A really good man will instal little; he will rather suggest to willing pupils who will do the installing themselves. A good artist travels across the seas to gain the criticism of a master; a good worker will be just as eager to have outside criticism, and if he is not eager, it is probably because he does not understand the true significance of it all—he has not been let into a share of the enterprise. By "share" is not always meant a share of the profits, though, in some fashion, that is ultimately desirable.

To let him into such a share he must know exactly what he is doing and what relation he bears to the finished product. Standardization up to a point has come to stay; there is no turning backward to individual handicraftsmanship; but there is a way possible to humanize standardized work.

One of the steps is to let a man know the cost of what he is doing and to give him an incentive to keep down that cost to the lowest point consistent with good work. When one foreman was given a sheet showing the cost of the supplies consumed each month, he cut down the total from four hundred dollars to two hundred and fifty dollars a month—things had been wasted simply because no one knew what they were worth.

In one factory repair charges formed a very considerable part of the overhead expense; repairs were done leisurely and with much "soldiering." A monthly cost sheet showed the foreman beyond question that this wasted time increased the overhead burden of his own department and brought the departmental costs up to an unnecessarily high figure.

The foreman had not previously realized that all these apparently little wastes had to be charged somewhere; but when those expense sheets began to come around to him at the end of every month the repair bills were more than halved.

Employers do not always realize that waste of supplies and materials frequently springs from an astounding lack of knowledge of what they are worth.

Sometimes the values are brought home by, in effect, selling the material to the workers at a price that permits them to make money if economy is used, but which will cut into their own money if they are wasteful. Take a certain gang of men who were soldering tin cans. Solder is expensive; yet these men "slobbered" it about to such an extent that they were using from eleven to nineteen ounces per hundred cans. Experiments showed that the correct amount should be something like five and one half ounces. The men concerned were consulted and a deal made by which they would share in the value of the solder saved.

Now these men are turning out more cans a day than they did before, and they average from three to seven ounces of solder for one hundred cans. The saving per man is about five hundred dollars a year—which is only another example of how coöperation between employer and employee makes money for both of them. The same plan has worked with equal success in operations involving the use of sandpaper, silk thread in a sewing-room, ink in a printing-shop, ribbon on hats, brass wire in electrical work, and so on.

A somewhat more elaborate idea is to give a foreman daily cost sheets on the work, together

with comparisons showing what the work has previously cost. The workers are intensely interested in these costs—more especially if they are put in graphic form—and will make a game out of beating former cost records. In one paper-mill repair costs were more than cut in half by this method, and in a shipbuilding plant where chaos had formerly been supreme and costs running amuck, this simple sharing of knowledge brought down operations to a workmanlike basis—and, what is more, reduced the labor turnover marvelously.

I have spoken of the saving in dollars due to the worker's knowledge of cost; but that saving is really not at all the most important feature—although, unfortunately, it is the phase that might appeal first to the employer. The big thing about cost knowledge is that it takes the monotony away from work and makes each operation, or series of operations, a subject for the exercise of intelligence.

The saving of money is simply one of the inevitable results of stimulating the spirit of real workmanship. A good worker never wastes; by the same token, the man who makes a point of not wasting becomes a real worker.

Knowing the costs is a step in the direction of becoming master of the job—that is, of the ma-

chine and the material. In comparatively simple manufacturing it may be that the only steps required for the other operations in the factory are so few that any worker knows his relation to the whole. But most manufacturing has so many and such varied processes that the individual worker does not know what kind of a link he is in the chain of fabrication.

To show him is a very difficult problem where the subdivision of labor is great, or where he deals with forces rather than tools—as when he uses heat. In every job of that sort the worker needs some record of quality or uniformity which can satisfy the creative spirit that the work itself can not satisfy. Each job requires special treatment, but the same principles run through all. You will note that I say "quality" or "uniformity" record. A quantity record is worse than useless, because production alone is not a stimulus to good workmanship, but is in fact opposed to it; for it springs from a desire to make money and not from a desire to do good work.

A concrete example of what quality records mean is also given by Mr. R. B. Wolf out of his experience in wood-pulp paper-making in several factories. An important operation is the "cooking" of the pulp, and the uniformity of

the product depends to a very large degree upon the "cooking" control. The work had formerly been governed by rule of thumb. It was monotonous and the workmen's interest seemingly could not be enlisted in it.

Mr. Wolf arranged that weight and moisture tests be taken frequently and the results for each squad plotted and kept on continuous exhibition near the machines. The men could not see what they were doing by watching the machine, but the graph showed them exactly what they were doing. In the first month, taking the standard as one hundred, they averaged from seventy-one per cent. to eighty per cent.; but in less than six months they were hitting ninety per cent. and had made a large increase in the quantity of product. The pulp of that mill rose from a poor grade to a special standard of its own. That increase in quality was made without financial incentive of any kind; the incentive came from the stimulation of the desire to do good work.

That is one method; it is not the only way. A large manufacturer of velvets was troubled with "seconds"; at times half a million dollars was tied up in goods that contained weaving defects that unfitted them for first-grade sale. He put the question up to the employees them-

selves—they were organized on the representative system.

The men appointed committees to investigate. They made tests themselves, and they retained experts from outside to make other tests. From time to time, they told of their work in mass meetings and received criticisms and suggestions.

Soon that whole factory was after "seconds." They improved machinery, insisted on cleanliness, and finally changed the weavers from a quantity rate to a quality. They have now all but cut out "seconds," and under the quality rate the weavers are not only making more money than before, but they say they are making it with less effort than when they tried solely for quantity. But the quantity has also increased! I have through my associates secured very similar results by the use of similar methods in a plant making linoleum.

Recognition of individuality through the opening up of the way to knowledge is the mainspring of creative effort. I have not attempted to sketch anything that approaches a *system* for stimulating creative effort, because there can be no one all-accomplishing system, and any one who imagines that a ready-made plan can be bought and put into operation forthwith is cer-

tain of disappointment. Human nature is not adjusted in any such summary fashion; one must study each situation and then solve it according to principles.

The management of the human factor in industry is so great and comprehensive a study that it can not be dismissed—as some would dismiss it—by hiring a welfare worker or a personnel manager or by adopting some quick and easy system. The subject demands close executive study, undertaken with an open mind and a keen desire to get at the facts. It is not a topic on which one can dogmatize, for as yet our knowledge is empirical. But as to its importance let me quote the statement of an executive who has successfully stimulated the creative instinct in his employees:

"It was found that the happiness or unhappiness of the worker proceeded out of the work he was doing. Hitherto it had been thought that his happiness or unhappiness depended upon the amount of pay he received for his work. It had been tacitly assumed that, however degrading or brutalizing the work itself might be, it could be ennobled by the amount of money paid for doing it. This was now shown to be a mistake.

"Work of a certain order, work which exer-

cised and developed the better faculties of a man, his imagination, his power of thought, his emotion, was a source of felicity; work of a purely mechanical kind, which exercised the hand but not the mind, was a source of misery. Wages, money, in no way affect the question, for they do not alter the character of the work itself."

That is not an overstatement of the principle.

CHAPTER VI

WHEN THE WORKMEN HELP TO MANAGE

"LET the hands run the place? You don't know my crowd. The first thing they would do would be to vote themselves higher wages; the second would be to vote still more wages, and the next would be to vote to abolish work. The Russians have nothing on the kind of people we have around here!"

That is the reaction of many employers to the suggestion that their workmen be given a voice in the management of the business; and it is a perfectly natural reaction. It is the employer's money or his friend's money that is at stake, so why should those who have nothing to lose have a hand in the spending? But this experiment has been made in twenty or more concerns in this country with startlingly good results.

To-day in America neither the owners nor workers are, generally speaking, ready for an entirely new relation. The workers are quite as suspicious as the owners—and that is saying a good deal.

On the whole, the workers are more opposed to the idea than are the employers, for the following reasons. Those who have socialistic leanings are convinced that the duty of the worker is to destroy capital and the wage system; although that view is not quite so prevalent here as in England. Others feel that the natural relation is one of bargain and sale through collective units, and they fear that mutuality will destroy the unions and, in time, rob the worker of the victories he has won.

The employers fear that mutual control will do just what the workers fear it will not do—and that is, destroy capital. Just at the present moment many employers have nightmares in which wild-eyed Bolsheviki stalk. To those employers who are afraid that a worker's government in the plant will play ducks and drakes with the sacred investment let me commend this warning by a radical English labor man:

"Besides chaos there will be deceitful kindness, and wherever there is kindness in the relations of Labor and Capital National Guildsmen should go warily; . . . the capitalists are busily at work securing the foundations of a new type of wage-slavery. They have discovered, to quote the words of Mr. Dudley Docker, that 'it is to the interest of all employers to make

their workpeople happy.' Their methods are obvious. They intend to buy off the leaders, and through them the led, by the offer of a very, very junior partnership in industry.

"Through Industrial Parliaments, through bogus workshop control, . . . through joint committees of every conceivable kind, and, above all, through fairly high wages and comparative security, the employers are trying to keep down the hostility between Labor and Capital to them so deplorable, to us so just. . . . To be kind and to make your workers contented is Capital's proper course, and were I a capitalist I would go to any lengths, short of surrendering my business, to produce harmony in my works. And the specifics I would use would be High Wages, Short Hours, Workshop Committees, and Joint Control. As I am not a capitalist, I hope my advice will not be taken. . . .

"I believe that it is Labor's duty to make the capitalist unhappy. The more Labor succeeds in this task, the more I shall be pleased. For constant unhappiness kills, and I want Capitalism to die. Labor should worry neither about what the capitalist ought to do nor about what the State ought to do. Labor should make up its mind what it wants to do—and then do it."

That this labor leader should oppose mutuality of control as tending toward breaking down the organization of labor is quite justified, for if the worker is so placed that he can secure exact justice in his working hours he will not need union help. Vigilance committees are most useful when orderly government is backward, but they disappear when authority becomes ordered.

As I see the situation, the eventual effect of joint control of industry will be to break down the distinction of capital as master and labor as servant, and to establish in its place equality of opportunity.

It is to-day generally recognized that no company can be managed by one man if the best results are to be achieved. Hiring and firing, exact salaries, and other indicia of economic dependence have to-day dropped out of the higher reaches of industry, for the single reason that they do not produce results.

What mutuality does in the executive branch of industry it does in the working section, and the tendency will be more and more to recognize that capital and labor are apart equally impotent, and hence that neither is entitled to more respect than the other.

But we are concerned with eventual effects

only in so far as we need to know something of the terminus of the road down which we start; we are more intimately concerned right now with what is the present effect of joint control and what may be expected of it.

This control, it is well to bear in mind, is only a means to an end and not the end itself; the end is to acquire an atmosphere that will permit creative work by freeing the intelligence and the persons of the workers from repressive control. I do not use the word "repressive" in any invidious sense as meaning "downtrodden" or "oppressed," but to denote the condition of the worker under modern shop management. Through no fault of his and through no fault of the employer, the modern shop organization does not permit of individual expression in the work or the development of individuality in the workmen.

Very astute employers keep sharp watch for bright workers and speedily lift them into executive positions.

It is these "capable" men who come to the front in any self-government scheme; they are natural leaders and they hold leadership according to ability. They are equally potent for construction or destruction. When given power, do they destroy or construct?

That is the question that bothers the employer who would like to do something to better relations, but who is timid about risking anything in particular.

Let 's see how one experiment in democratic government of business worked out. In the Filene Store, in Boston, the Coöperative Association to all intents and purposes regulates wages, hours, and conditions of work. The employees act through committees, the most important of which is the Arbitration Committee, which sits as a court to hear disputes between employees and the store.

The members are all employees, elected by secret ballot, and before them come the complainant and the respondent, both represented by counsel selected from the employees; they hear testimony and then render decisions. Taking the whole record of cases over the years that the plan has been in force, it will be found that the decisions against the store and the decisions in favor of the store are about equal.

When the Filene management asked the employees to nominate a certain number of their fellows from whom directors of the company might be chosen, the first selections were of the firebrand or "hot-air artist" type; but, after a year or two, the employees found that such men

talked much and did little, and they then turned to men of the character that the existing directors would themselves have chosen.

In all the years of the Filene plan, the employees have never once attempted to take an unfair advantage or to try anything that might be termed a "hold-up." The corporation managers have absolute confidence in the integrity and judgment of their employees.

Edward A. Filene ascribes much of the success of the adventure to the fact that the line of demarcation between employers' and employees' authority is hazy. There are no "No trespass" signs; no subject is forbidden to the employees' association for discussion; and, because there are no limits, there has been no trouble with trespassing. The store people investigate the finances through a committee, and have made some excellent recommendations which the company has adopted.

But there has never been a clash of authority, and it seems most unlikely that there ever can be. And as to the intelligence with which financial problems are met, I may say that the employees, in presenting the financial statement to their constituents, adopted a simplified arrangement which the executives found so much clearer

than their own that they adopted the same arrangement!

I personally know the facts or have had investigated perhaps a score of instances where exceptionally wide powers of authority have been granted to workers, and I have yet to learn of a single instance where that authority has been abused or has been used for any other purpose than advancing the best interests of both the company and the workers considered as a whole.

Sometimes groups of workers do try to put over higher wages than they deserve, but they seldom try this more than once, for the workers' committees investigate such appeals carefully with the aid of testimony that would not be available for the employer, and they decide on the *facts*. If the appeal is unjust they do not hesitate to say so in their decision, and, where such a turn-down by the employer would mean a strike, the workers will accept the findings of their own committees without question.

Their efforts are by no means all in the direction of raising wages; a number of cases are on record where they have reduced rates because improved methods made the old rates too high; these reductions have been usually at the behest of the men and not of the company. How does

it happen that members of a union almost always make exorbitant demands for wages, and that the same men acting in a shop committee do not make excessive demands? It does not seem logical; is this a Dr. Jekyll and Mr. Hyde act? Do they receive the faith of a new dispensation overnight?

It is perfectly true that men forming a union committee will indorse the action of a union business agent in demanding wages which they know the company can not pay, and they will take exquisite joy in adding petty, irritating demands apparently just for the sake of making them. It is also perfectly true that those same men, sitting as a shop committee with full responsibility, will as a rule quickly arrive at a just wage and will dismiss every irrelevant demand.

And the reason is this. While acting for the union they are against the shop and trying to drive the best possible bargain. They do not care whether the shop goes on or goes down; they are dealing with a natural enemy and at arm's length. They are not interested in how the company manages—that is the company's affair. But take these same men in a shop committee. They are charged with administering exact justice between the men and the company,

and because they have that responsibility, they will dismiss every consideration that might tend to its avoidance. A few men will be found who will toady to the company, but they are comparatively rare—about as rare as those who will toady to the men.

The result of my observations is that workers under responsibility act just about as other people do, and they are neither more nor less honest than the average human being picked at random—and, unless one has a mind to change the world, that is about all that can be expected of anybody. It is a good enough average, anyway. Most executives are content if their boards of directors measure up to such standards.

We are inclined to regard all this mutuality of shop management as something revolutionary and fraught with unknown evils. Presumably we have been trying out the theories of representative government for some time in this country—to be exact, since about 1776—and we are quite committed to it both in theory and in practice. We do not fear the votes of our employees in state and national affairs, and in fact would think that the country was going to the dogs if universal suffrage were withdrawn. Then why should a factory-owner fear the same

sort of government in his factory? For no reason in the world except that he does not know what it holds; he merely fears the unknown.

Practically speaking, experience shows that it is not advisable to introduce autonomy all at once. It is better to go a step at a time, for the simple reason that drastic changes are upsetting. Neither employer nor employee is quite ready to go the whole distance from the very outset, and to put in an entirely new foundation would be to run the risk of failure from severe business indigestion through lack of assimilation.

It is well, I find, to start with a single committee to adjust some particular trouble, and then, keeping that committee standing, gradually to enlarge its powers until the time comes for another committee. The whole Filene plan grew out of a dispute with a girl cashier over a shortage for which she claimed that she was not responsible. She said that any fair-minded outsider would agree with her, and the store manager took her at her word and selected an umpire. The umpire sustained the girl; and from that incidental beginning grew the whole of the plan that is in force to-day.

It is not necessary and it is not advisable,

unless a company is face to face with an emergency such as a strike, to do more than cut corners at the very start; and then gradually a system which exactly fits that shop will develop in good time.

That plan is strongest which has the greatest elasticity; therefore the design should be laid out in bold, free strokes and not in detail. Definitions of powers, exact procedures, and the minute regulations should form no part of the eventual constitution or other instrument which may be adopted. It is really better to follow the British example and make the constitution consist of the body of the laws and resolutions which are, from time to time, passed. An exact definition of a power strikes some bumptious human chord that makes exceeding that limitation the only act worth while!

Therefore it is seldom well to "blue-print" the plan or to issue a rule book or otherwise spread out. The executives will have to run the risk of having their ideas termed loose and unscientific, and also may cringe before complete "plans" and "systems"; but, for all that and in spite of all that, the controlling idea should be to conform to existing human nature and not to change human nature forthwith after the

manner of reformers. A lot of good ideas have been lost in the haste of their attempted application.

Where and how to start an installation depends entirely upon circumstances. If a dispute happens to be on, make that dispute the subject for the first committee, and take that opportunity to say that this committee is but the beginning and that you hope a more complete working relation can be evolved out of the experience. Then ask the employees to elect representatives to confer with the executives on important matters, and through those representatives work out the sort of organization that seems to fit. Most shop committees will welcome good suggestions, and it can be taken almost as an axiom that a suggestion which a committee refuses to adopt is not a good one, and that the executives can deem themselves lucky that it did not become a rule.

As the organization grows, most of the bothersome details of shop management can be handed over to the representatives—matters of inspection, hours and conditions of work, manner of payment of wages, shop rules, welfare work, and, finally and by degrees, the fixing of wages.

Putting wages aside for the moment, examine

into the working of representative bodies on shop rules and discipline. Many managers insist on large books of rules, and the enforcement of these rules causes no end of resentment, which reflects itself in bad work. In practically every plant where the men are represented in the management, shop discipline and rules have been put upon an honor system. The rules that serve no good end are cut out, and a few broad, essential principles are lived up to as a matter of honor.

For instance, most shops have trouble in getting the men at their places ready to work when the whistle blows, and in having them stay there until the quitting whistle. In the majority of shops the stream of workers starts out of the gates within ten seconds after the whistle, which means, of course, that the men have taken time by the forelock and made ready well in advance.

In one shop the workers' committee merely posted a notice to the effect that men who did not spend the full time at their work would be considered as in opposition to the best interests of the mass of the employed. Thereafter not a worker was late in starting or early in quitting, excepting of course for unavoidable causes. Moral force is difficult to resist.

In another plant a committee maintains moni-

tors of its own, and the names of offenders against discipline are posted. Sometimes the committees have imposed penalties; but in general the experience is that money penalties have not the same effect as moral ones. Moral forces are seldom at the command of the company management, but they form the strongest weapon of the shop committee.

Hours of labor are frequently subjects for dispute. It does seem impossible that any one should accomplish as much in eight hours as in twelve, but in many lines of work this is true nevertheless. In one eight-hour day a man will hardly do as much as in one twelve-hour day, but he frequently will do more in a month of eight-hour days than in a month of twelve-hour ones, for the reason that the eight hours will permit him to keep the vigor that means concentration.

Workers themselves are not agreed upon the length of the working day. The basic eight-hour day is not a time but a wage matter, and violates the principle of short hours of concentrated work. All of the committees I know have discussed hours as affecting their own work, with the result that they eventually cut down to eight hours, without overtime, excepting in cases of necessity. More often than not

they then turn out more work than under the ten- or twelve-hour plan.

In each instance the cutting of the day has been gradual, and because the length of the day vitally affects piece workers each cut is small and is made the subject of study. If the day happens to be eleven hours, they will usually first cut to ten and then tabulate results. If they find that as much work is being done as before they will try another cut; and so on until the day seems to suit. With each cut they put it up to the workers to decide how they shall work, and they let every one know that the success of the cut depends upon the actions of the people themselves. With this approach, the workers usually find where they have been wasting time under the old hours, and jack themselves up for the new schedule.

Another committee that marks a long step forward is the efficiency committee. The very word "efficiency" is anathema to the worker, because he associates it with grinding, wearing force that means more dollars for the owner and a broken constitution for him. True efficiency, of course, means nothing of the sort; it means the utilization of the waste time and motion, and is an addition to the power of the worker. Only through the workers' own gov-

ernment can the best efficiency results be obtained, and by enlisting their intelligent help the subject can be made of absorbing interest.

The work of industrial or efficiency engineers has often been hampered by the lack of coöperation on the part of those affected—the natural feeling of resentment against being forced to change established practices without knowing the reason why, and the suspicion that the new ways may be soul-deadening.

I dismiss, for the moment, the equally natural suspicion that the efficiency engineer is a crank; so many charlatans have found clients or victims that the name "efficiency" has become invidious in the extreme. I prefer the term "industrial engineer," and instead of "efficiency practice" prefer to present the subject as a simplification of existing practices—the lopping off of the unnecessary things. If one presents better industrial practice in this fashion, then it takes on a new and comprehensible meaning to the worker, and he will evidence the same interest in it that he does in the saving of material and other phases that go to the mastering of a job.

The efficiency committee will not only make smooth the path to better methods, but through suggestion systems and investigations of their

own will often do more toward real economy of operation than it is possible for any professional engineer to do. In one plant the men have themselves re-designed nearly every machine in the place, with astounding results in the way of production, quality, and lowering of sales price, with an increase of wages to the men and profits to the company. In another factory, within six months from the time the workers were given a voice in the management, they devised more improved machinery than had been known in that particular industry within twenty years.

Shop committees are far better equipped to deal with union matters than are employers. We all like to dodge the fact that unions exist; we like to close our eyes to the fact that they are growing and that no manager can to-day say: "I refuse to recognize unions as such; I will deal only with men on the pay-roll." Unions are here and to stay, and they grow steadily more powerful. It is for the employers to take them as aids to progress or as antagonists.

Meeting them as antagonists, fights and more fights are bound to occur, and each fight leaves the corporation combatant weaker. But there can be no antagonism when the corporation rep-

resentatives appointed to deal with union affairs are themselves union men, elected by the body of the workers to preserve their own best interests.

Take several specific cases. A strike was ordered in the garment trade in a Middle Western city, and every factory but one closed. In that one factory the committee (and all its members were union men) stated that it would not be right to penalize their fellows and employers for the sins of others, and they refused to strike —and also preserved their union standing. In an iron-working shop, the mass meeting called by the committee to consider the union demands for a closed shop voted against closure—and the chairman of that meeting was president of the local union.

Unions do not all want to fight. A few union business agents think that their own jobs depend upon the amount of trouble they can stir up, but, generally speaking, union workers do not differ from other workers unless they are smarting under a sense of injustice, and then, just like other people, they do want to get back at the boss. The union tenets of closed shop, limitation of output, regulation of hours, and the fixing of wages are all part of an economic defensive that need not be and is not maintained

when the reasons for it vanish. And under autonomous works' control the reasons do vanish.

And now for wages. In a previous chapter I have spoken of the limits of wages, and reached the conclusion that wages are only high or low according to the amount of production they represent. Efficiency and wages are bound together. Workers oppose better methods in piece-rate work, because better methods usually mean lower rates—they see the boss getting more for his money. Therefore they will "soldier" when rates are being fixed, and they commonly make the whole rate question a kind of "hide-and-seek" affair.

This is the big problem that wage committees solve. They banish the arbitrary fixing or changing of rates and insist upon just rates that will return wages commensurate with effort. They will raise or they will lower rates, but always with an eye to the results; they will not lower because a man is making too much money, but they will lower if he is making more money than the amount of skill and effort that he expends deserves.

If Smith makes just a living wage at a certain rate and is a fair average workman, while Brown, who is exceptionally skilful and fast, makes high pay, a committee is not likely to

insist that the rate be cut to the point where Brown can just make a living and Smith will have to leave or starve. I have considerable confidence that wage committees will, with rare exceptions, adjust wages and rates more scientifically and with greater justice and satisfaction to both employees and employer than is possible for employers working through foremen or superintendents.

I have not spoken of the composition of committees or control bodies. Ought they to be appointed or elected? Ought they to have representatives of the company, or ought they to be made up solely from the workers? Here again circumstances control and developments govern; it will not do to lay down rules. In some cases, particularly in small shops, monthly mass meetings can do most of the work and hear the reports of committees of their own appointment; in other cases more elaborate election and representation machinery is quite necessary, and there may be cases where joint committees can be appointed. But in general I would suggest that the best results will be had from committees that are elected by the workers or appointed by bodies elected by them and then given complete responsibility—reserving to the executives the right of confirmation.

The whole thought is toward spurring on the freedom of intellect which will promote the creative faculty. The democratic control is only a step toward realizing that freedom. We in the United States seldom have recourse to the courts; we seldom have reason to claim the protection of the Bill of Rights; but we should feel mightily oppressed if any of these rights were taken away.

It is quite the same with shop autonomy. In the beginning the very novelty causes a lot of litigation of various kinds, and complaints are made from the joy of having the opportunity to make a complaint; but that novelty soon wears off. Then things run smoothly and the number of cases rapidly decreases; most complaints are settled at once and without recourse to the judicial machinery—it is the sense of fairness that is the big moving feature, and not the exercise of the powers.

Workers in shop self-government do not act very differently from the rest of us under national self-government.

CHAPTER VII

PROVIDING STEADY JOBS FOR YOUR MEN

ALTHOUGH perhaps no one is under the necessity of living, even a workman, if he is to live for long, must eat the year round. And to eat he must work.

Continuous employment is a most important element in handling labor to the greatest advantage. But apparently it is seldom realized.

A seasonal business is invariably a poorly run business. I have never yet seen a business that could not be put on a year-round production with profitable results.

Seasonal production is more or less the reflection of the American habit of taking things as they come. We are, in many industries, just getting to the point where we no longer can, because of a large margin of profit, be satisfied to take preventable losses.

When we reflect on the economic waste of operating a plant to capacity for half the year and then letting it stand idle for the other half, the practice is properly classed as a vice. Like

all business vices, this one has bad effects on the profits, the most outstanding being:

(1) That seasonal work increases the selling price by loading the product with the burden of the idle plant hours. Increasing the price decreases sales.

(2) By making the term of employment intermittent, the workers are made economically insecure, and hence must give their first attention to money instead of to work.

Take the first proposition. It is self-evident that, if proper costs are kept, the expense of an idle plant must somehow be made up by adding it to the selling price of the product. Especially flagrant instances of this may be seen in the immense plants that are sometimes erected to take care of the whole of a seasonal business within a very few weeks. For example, most shoe factories are much larger than any excepting peak production demands, and many clothing factories come under the same head.

The sales, with this economic waste added to the price, are bound to be smaller than if the price represented only material and labor costs plus the share of the overhead on a fifty-two-week production basis. It is an economic law

that the distribution of an article is in inverse proportion to its price. Ford's inexpensive automobile is an example of this. Year-round production is one of the reasons Ford's overhead per unit is small.

In a seasonal industry labor is almost sure to be inefficient and disorderly. A good workman will not voluntarily take seasonal employment. If forced to do so by the pressure of the grocer and landlord, a few experiences are apt to make a poor workman of him, if not an active anti-capital agitator.

It is logical to expect that industrial relations are at their worst in the seasonal trades. It is in the building, garment, shoe, silk, and cotton industries that the greatest number of strikes occur. Seasonal labor towns, like Paterson, N. J., and Lawrence, Mass., are usually hotbeds of disorder. Aside from the antagonism aroused in the men by the injustice of being thrown out of work against their will, there is another good reason for this: the men are not with one concern long enough to allow a real industrial relation to take root.

If the consequences of seasonal production are high prices, with low profits and labor unrest, then the results of putting a seasonal industry into the year-round class will be:

(1) To reduce the price of the articles and thus gain greater sales and larger profits through a more frequent turnover of the capital involved.

(2) To stabilize the labor factor, and, through coöperation, gain a greater return per labor dollar, which in turn will permit the profitable paying of higher wages and the realization of something of the latent capacity of the workers.

None of the demands of labor is more stressed than that work shall be steady through the whole year. The individual employer conducting what he thinks is a seasonal business may dismiss unemployment as no concern of his; but these social matters are not to be so dismissed. The man who is willing to work has a right to be able to find work; if work is not to be had, then he has a right to look to the state for support—that is, in our modern conception of society. That support may be given in allowances, as in England, or by the allocation of public improvements to dull seasons. It will be given in some manner. Why, then, should an uneconomic manner be chosen?

It is certainly uneconomic to tax industry to support idleness, or to tax industry to put up

what will probably be quite unnecessary public buildings and the like, with the stupendous waste that so often accompanies a public undertaking. In either event, the seasonal industry will pay for the unemployed days by an increase in taxation, and that, added to the burden of carrying unproductive buildings and machinery, will all go to increase the cost of the finished product and to restrict its market. The man with a business must take care of unemployment in one way or another; so why not care for it in a manner that will benefit both the worker and himself?

Aside from the loss occasioned to the employer by the general dissatisfaction of workmen who are economically insecure, seasonal business suffers two other direct and often easily measurable losses.

A workman needs a certain amount of money in order to live the year round. It is not the daily wage, but the total yearly earning, that interests him the most. Therefore, if he must face a period of unemployment, he must get high enough daily wages to allow him to lay up a surplus for idle periods. If you doubt this, compare the wages in seasonal lines with those paid in year-round jobs. Then, too, the bulletins of employment agencies are full of such

comments as "year-round work," "permanent employment," and so on, showing that workmen are attracted by the hope of permanence.

This means that men will work for less per day on a year-round job, with a resulting reduction of the unit labor cost of the product.

The second measurable loss is that occasioned by losing trained men. The seasonal plant seldom gets back the men it laid off the preceding season. Nearly any job demands a greater or less training, and few workmen can be trained to do even the simplest operation for less than twenty-five dollars. When, therefore, a trained operator leaves permanently and his successor must be trained, there is a definite loss.

In several plants that have done away with seasonal lay-offs, it has been found that a marked improvement has occurred in the attitude of the men toward the job. A man who knows that in a few months he is going to have to face jobless days is bound to feel, even if he does not say, "If the boss does n't care what happens to me, why should I care what happens to him?"

He will, in consequence, soldier on the job, be careless with work, tools, and machines, and in general be antagonistic to the employer; and the difference between antagonism and coöpera-

tion is often the difference between loss and profits for the company. Even where profits persist in spite of antagonism, they would be larger if the men were for the company. A man who has to worry over his job or his finances is not in the right frame of mind to do much good work. The wise employer makes sure that his men are financially free from worry.

Although, most employers will admit that a seasonal business is not the most desirable kind, few will admit that the seasonal element can be avoided. How about the window-screen manufacturer who overcame six months' shut-downs by taking on a line of game boards to sell to the Christmas trade? He thought his business was incurably seasonal, but it was not.

Therefore let us assume that a seasonal business is a diseased patient and look about for a cure. There are no absolutely incurable cases —at least, I have never heard of or seen any. But there is no panacea, no patent medicine, which, after shaking the bottle, may be administered as a cure-all.

The first step toward solving the problem of providing a year-round market is to know costs with almost absolute exactness through every month of the year; then one can determine just

how much of the burden assessed during working periods is due to the weeks of idleness.

That starts one on the way to estimate what the product should cost if manufactured at plant capacity throughout the year—what reduction in price might be brought about by eliminating the wastes of seasonal production, thus perhaps by virtue of a lower price reaching a larger and more regular market. These costs are fundamental, and unless they are accurate no well reasoned plans can be laid—for those plans can have no higher accuracy than the figures on which they are founded.

Next in order is a study of the market—its buying power and buying habits. Quite often, seasonal buying is due as much to the seller as to the buyer, and is a relic of the days when the merchant came to town twice a year to "stock up." When this is true, it is up to the seller to educate the buyer in the advantages to be gained by him. It is not out of the question to change the buying habit of an entire nation. Well considered advertising has done it in many ways already. It should be equally effective in overcoming seasonal tendencies.

Or, again, it may be that the seller has so limited his territory of sale as to be himself con-

trolled by the seasons. It is well to remember that the seasons are not everywhere the same. South of the equator they are exactly opposite to ours. Even in the parts of the northern hemisphere where the seasons correspond closely to those in the United States, foreign markets will often help to smooth out production peaks, due to the length of time goods must be in transit. In some parts of Russia, for instance, climates are nearly identical with those in this country. Goods for those sections, which are purchased by the consumer seasonally, must therefore be shipped from here from two to four months ahead of the season. Therefore, in a business having, say, two production peaks a year, the low points of production could well be filled by manufacturing for the Russian trade.

Needless to say, Russia has been taken simply as an example. There are dozens of other countries where this is true. A little geography will not harm any one and especially the sales manager.

In this study should be an estimate of what the market might take out of season if the price were sufficiently attractive, and also an estimate of how far ahead it might be possible to book orders. Those articles in which the cost of the

raw material is of prime importance, such as cotton and woolen goods, do not lend themselves so easily to this sort of planning as do those articles in which labor is the chief factor.

Following the examination of the present market comes a study of the possibilities of other markets in the United States and abroad which may act as seasonal outlets to stabilize production—not take care of surplus, which is about the only use of foreign markets that we have made to date, but as a part of the year's production program.

With these facts in hand, one is ready, intelligently, to plan. And probably this intensive examination of the business will turn up some surprising facts on the markets that were supposed to be good and on the prices that have been charged. Too often prices are permitted to be made by rule-of-thumb competitors, and it may be found that some markets have been sold at a loss. In the interests of full-time production, it may be advisable to sell in some markets at a loss, because that loss is not so great as the loss due to "shutting down"; but, in any event, the knowledge should be in hand as to whether or not losses are being taken.

If the price based on a full year's production can be made sufficiently low, then it is up to the

sales department to get customers to stock ahead and take advantage of the price. The canny retailer of to-day does not stock much ahead, for he knows that quick turns and small profits per turn form the best business basis.

But the much lower price may attract him; or, again, a solution may be found in the trade acceptance, which can be used to bring the time of payment for the goods up to the usual period, and, at the same time, let the manufacturer have the use of the money. Acceptances longer than three months are not subject to rediscount in the Federal Reserve Banks, but, following the European practice, long-term acceptances are now being taken as collateral for loans and discounted when they enter the three-months' period.

Another scheme is to coöperate with dealers in putting on sales of goods out of season. This is a particularly desirable method in that it benefits both the buyer and seller by promoting business in dull times. It has been used with great effect by retailers in white goods, furniture, and the like; and there is no reason why the same practice can not be extended to many other lines in and outside of retailing. Building, it would seem, offers a particularly wide field for bargain days.

Several manufacturers have, with considerable success, increased their advertising in the periods when sales are dullest, and cut it down somewhat during the natural periods for buying; and, following the same principle, the commissions to agents have been made highest out of season and lowest in season.

As the quality of a product is improved, less and less difficulty is had with seasonal purchasing. A manufacturer in Cleveland, whose shop was controlled to a large degree by the workers, put the question of season up to them, and they concluded that extra quality would make their product sell all the year round. With that thought in mind, they have established so high a standard that the product sells the year round, and it has not since been necessary to lay off a single employee. And they are in the clothing business—which is usually most seasonal.

Accurate planning by which the demand is distributed over the production year nearly always works wonders. Take this instance of a manufacturer of household specialties. He made about fifteen hundred articles, and, although all were staples, they showed a surprising seasonableness in distribution. The demand ran approximately thus: first quarter, twenty thousand pounds; second quarter, eight

thousand pounds; third quarter, ten thousand pounds; fourth quarter, thirty thousand pounds.

Following the demand, therefore, meant alternate periods of intensive production and virtual shut-down, with all the waste and labor unrest that such intermittent production entails. This is how my organization stabilized this business:

We tabulated the shipments for five years preceding, month by month and item by item. Each article was studied alone, and, wherever the demand was sufficiently uniform, we established maximum and minimum reserves—that is, we expressed the sales in terms of so many days' supply, and scheduled production to keep thirty, forty-five or sixty days ahead, as needed, thus filling up part of the factory's capacity for certain months of the year. This applied only to the articles of fairly uniform demand. The very seasonal goods were on a different basis, and here we deliberately prearranged a distribution of production, so that the articles might be made up as they dovetailed into the production scheme, and yet, when the peak of demand arrived, the stock would be ready to ship. Here is the schedule on a single article:

	Quarters			
	1st	*2d*	*3d*	*4th*
	lbs.	lbs.	lbs.	lbs.
Past Sales	250	300	175	657
Monthly schedule of manufacture	375	375	375	300
Balance after expected shipments	125	75	200	25
Accumulated reserve	125	200	400	25

Every item was analyzed in this manner and a program outlined, with the following results:

	Quarters			
	1st	*2d*	*3d*	*4th*
Sales	20,000	8,000	10,000	30,000
Production	18,000	15,000	15,000	20,000

Instead of a widely swinging production range from eight thousand to thirty thousand pounds to meet the sales levels, the production varied only from fifteen thousand to twenty thousand pounds, and other articles were so put into production as to keep a practically uniform factory output during the entire year.

The disadvantage of this method of planning is that the rate of turnover is somewhat slowed down by the large stock which must of necessity accumulate; but that objection is far from serious when lined up against the "in-and-out" manufacturing year which formerly existed.

Selling abroad is, however, the antidote to

seasonal home buying which holds the largest possibilities, and unless the American manufacturer takes advantage of the new opportunities he is certain to have difficulties in preserving an even flow of production and therefore of labor. As I have said, year-round production is to be considered, not as a labor aid, but as a step preliminary to even the hope for efficient coöperative work.

The scientific method of foreign selling is to fit it into the home schedule, in much the same way as I have just described, to fill the gaps, and then to go after the foreign sales with the production schedule in mind. It will not help matters to have the foreign demand coincide with the home—that will only be increasing the load at the peak, and will aggravate the existing inefficient production.

The real place for foreign sales is in the dull seasons at home. The manufacturer thus selling is able to fix his costs well in advance, and to go through the year intelligently, instead of having spasms of convulsive activity alternate with semi-comas of lethargy. The main hope of most seasonal businesses lies in overseas distribution, and, with that thought in mind, prices can be made that will be nearly certain to secure the sales.

In a few businesses—perhaps in more than a few—other lines can be taken on, after the manner of the coal-dealer who handles ice in the summer-time and thus keeps his motor-trucks engaged. The manufacturer who declines to take on new lines much resembles the bricklayer who, when out of a job, refuses to take up any other wage-earning vocation on the ground that he knows but one trade.

American manufacturers discovered, among other things, during the war, that their plants and their workmen are capable of making many hitherto unheard-of articles. The tendency of standardization is to lead both the manufacturer and the worker into the idea that they can make only one article, and that in only one way. War work was a tonic for this purely mental disease. The country has been short of skilled workers, and especially of all-around machine men in other than the special tool-making trades. Now we have a fairly large body of men who, if not skilled, yet are not wedded to a single kind of work.

These men form the nucleus for such owners as desire to manufacture what might be called a buffer product to keep the factory going when the main or seasonal occupations have gone. It is quite impossible to make rules or even sug-

gestions for such complementary products, for everything depends upon the nature of the main product and the existing equipment. Sometimes a line similar to that already made can be taken on; sometimes the departure will be into very different lines.

For instance, the packers, partly to use waste materials and partly to preserve an evenness of flow, are not only in all kinds of canned goods, but also in sporting, outfitting, and in many other apparently unconnected branches. The Du Ponts have branched into a dozen or more lines, and in fact nearly all of the very large manufacturers have taken on one or more side products.

Following out this supplementary and complementary field is of most adventurous interest, and its study is not only worth while from the continuous-production standpoint, but also for the utilization of the buildings and machinery bought for war work.

Perhaps I have spoken as if the only seasonal business is the one that must shut down its plant entirely at times. That, of course, is not so. The business that has fluctuation enough ever to require men to be laid off because of lack of work, due to other than general depressions, is seasonal. That is, it is either seasonal or

poorly planned, and in either event needs a doctor.

The long and short of it is that this dull period lay-off disease results in economic losses both to the men and to the employer. To the men it is most serious, for their margin between earnings and living is narrower than for the plant-owner. To the men a lay-off is tragedy. To the employer lost profits may or may not be serious.

CHAPTER VIII

PRESERVING THE WAGE SYSTEM

NOT wages alone, but the whole wage system, is to-day on trial throughout the world. The test has not yet come in America, but it will come, and we shall have either to reply with an adequate wage system or accept the principles of Marxian socialism with its total abolition of capital and wages.

What is the wage system? Without going into the maze of phrases that surround most of the definitions, it is this: Capital owns the means of production, while labor operates the means of production. Each must have wages. In modern industry, labor can not own the means of production, but must work for capital —hence the term "wage slavery." Capital is an inert and useless thing without labor. Labor can not exist without capital—it must either work for capital or take over the means of production, thereby destroying capital.

The opposite of the wage system is commun-

ism, in which capital is eliminated and labor owns the means of production.

If the wage system is to survive the coming test, it must be sound and equitable.

If the wages of both capital and labor are so nicely adjusted that each is better off in union than they would be apart, then the capitalist system—the wage system—is justified. Otherwise it is not.

The object, then, is to adjust these wages to a nicety, so that the benefits will be mutual—so that each will get its fair share and each will know that it is getting its fair share. There is no innate compatibility between capital and labor; they are bound only by money ties—which, until human nature changes, will be the strongest ties known. If capital can not have a fair share, it will not bother to employ itself and will seep away. If labor can not make any money out of capital, it will conclude, with the Bolshevists, that production for profit is a failure and that capital had best be abolished and production for use substituted.

To be equitable the wage system must guarantee to the wage-earner several things. One is year-round employment, which I discussed in the preceding chapter.

Germany seems to have been the first country

to get at this root of the trouble. There it has so long been a maxim that capital must provide twelve months of work each year that one no longer thinks of discussing the question—it is a settled fact. German factories do not have seasons. In the Krupp plant, for instance, between 1870 and 1918 the force was never reduced and the works were never shut down.

And, although munition products formerly made up a steady all-the-year business for Krupp's, they absorbed only five per cent. of the weight of the total output, and do not at all account for the fact that the rolling-mills, the forge shop, and the many other departments dealing with peace work, kept their full output, month in and month out. Our own steel works do not do that.

And the apparently seasonal occupations, such as the woolens, the cottons, and the silks, likewise, in Germany, have managed to preserve their full year of work, either by stocking in dull times or by sending their products into distant foreign markets where the seasons are reversed. German production costs were extremely low, because the idle plant charges did not have to be borne by the working hours, and neither did men have to be paid, while working, for some time when they would not be working.

The other result is that, due to this principle of mutual obligation of capital and labor, the workman of Germany to-day is not dissatisfied with the wage system, and does not, with a few exceptions, desire to abolish capital.

Moreover, the German workers have accepted the economic principles that money is only a medium of exchange, and they are perfectly willing to calculate their wages in food-buying power, to have them reduced or raised according to the purchasing power of the money. Because of this principle, unemployment has always been at a very low figure in Germany. Recently Essen was much perturbed because it had fifteen thousand unemployed on the streets, whereas in normal times it has no unemployment. Can one imagine Pittsburgh being worried because a mere fifteen thousand people did not have jobs? I think that the Essen figure is below the normal unemployment of any of our larger industrial centers.

The German employer does not change the size of his force to suit the seasons; and, since he does not discharge men, they rarely leave of their own accord. Consequently German factories, in normal times, have almost no labor turnover at all, except that arising from illness and death. The majority of German concerns

consider ten years a low average for a worker's length of service. If Germany had a high rate of labor turnover, the result would not be so serious as in America because of the great number of skilled workers that is always at command. But, considering the enormous waste of money in the American turnover, is it any wonder that Germany, without as highly developed methods or machinery, can undersell us?

The reaction to seasonal work in the seething labor situation of England has been the demand on the part of the unions that work shall continue through the year, and it is to-day accepted as a fact by English employers that wages are a yearly and not a weekly or fortnightly affair.

The English trades unions are organized on the basis of capital and labor, and the employers see in them the greatest bulwark against the rising tide of communism. The so-called Joint Industrial Councils are the announcement of England's desire to join organized labor and organized capital against the destructive elements.

These councils are interesting. The provisions are for a national council, made up of representatives of the unions and representatives of the employers' association. This council will decide all matters that are capable of national

adjustment. Next below them will be district councils, made up of the representatives of the district union organization and the district employers' organization. And, finally, in each shop will be a workshop committee, composed of representatives of the employees and of the employer. Thus each industry will have responsible bodies for the adjustment of disputes and for the application of rules. The effect will be to create vast guilds, and it is not unlikely that the necessity for uniform rules and procedures will be such as to take away the individuality from enterprise.

The war proved to most of us that industry can not well be controlled from the top, but that to function to best advantage a large degree of freedom must remain with the individual. The joint industrial councils provide all the evils that attend the socialization of industry. They suffer from that lack of elasticity, that woodenness of effort, and that drab uniformity which characterize, say state-owned railways or postal service.

And yet, the joint industrial councils are the logical result of the theory that capital and labor are natural competitors, and that it is the business of each to get all that can be had from the other. That is the opinion held in England,

where collective wage bargaining has reached its zenith and it remained only for either capital or labor to vanish. Capital forced down wages or locked out men whenever it saw an advantage to be gained, and labor forced up wages or struck whenever it found the capital particularly needed its services. The industrial councils are not so much a truce in this war as the provision for continuous machinery so that the bargaining may go on without the waste of strikes or lockouts. They represent a mutual concession to preserve the wage system.

Against the wage system are arrayed, and especially in England, a great number of radicals who are striving for the overthrow of capital. All of the recent strikes in England—the big Clyde and Belfast strikes, the London dockers' strike, the various strikes in the engineering trades and the coal-mines—were primarily directed against capital, and all were without the sanction—and in fact in direct violation—of the orders of the chief union officials.

These strikes are ostensibly for higher wages and shorter hours, simply because these are arguments that catch the unthinking. For instance, they asked for forty hours a week; yet the leaders publicly said that if they got the forty-hour week the next strike would be for

thirty-six hours, and so on down the line until the employer threw up his hands and said that he could not go on.

Thus, growing out of the wage system in England we find two parties: the first would preserve the system by elaborate but stifling constitutionality; while the other would destroy it by direct action. Neither course would be welcome in the United States, and it is therefore the part of the employer here to make the wage system so equitable that it will neither have to be incased in a cage or be the subject of attack.

Let us see the courses suggested by the opponents of the wage system—I am quoting from an English Labor man:

"More important even than changes of structure are changes of policy. The trades unions must abandon the old definition of their function which explained their existence as necessary, 'for the purpose of maintaining or improving the conditions of the wage-earner's employment,' and remodel their policy with the aim of becoming '*associations of workers for the purpose of overthrowing the wage system and assuming the control of industry in conjunction with the State.*'

"Such a share in control must develop out of the existing situation, and can not be postponed

until the structure of industrial unionism is perfected on the one hand, and all the great industries are nationalized on the other. The unions, then, must be prepared to wring a share in control from the Capitalist, so long as the State continues to tolerate his command over our industrial resources; but such control must be sharply separated from the bare suspicion of partnership.

"The unions must be adamant to every proposal, under whatever name it may be put forward, which could lead them to compound the felony of capitalism. The value of every step towards control must be judged by whether it leaves the capitalist weaker and the trade union stronger as an external, autonomous, encroaching force. If it does not seem likely to lead to this result, it must be refused.

"It is clear that 'joint control' may mean control between the unions and the employers, nationally or locally, by means of joint committees, or it may mean 'workshop control' between the employers and the employees and the workers in any particular shop. In the latter case it is vital to insist that it shall be participated in by unionists only; but the trades unions concerned must see to it that it is they who enforce the conditions, and not the employers.

"In general the true policy of Labor is one that insists upon the employer dealing with his workpeople only through the union and not as individuals; and in this connection it would be well to strive to ensure that, while the worker continues to sell his labor, he shall sell it not individually but collectively, and that payment of the worker shall be made through the union."

That is an excellent statement of those who, within the union movement, would pervert it to its own destruction. Those communists outside the unions would by direct action destroy both capital and the unions, and substitute the control of the proletariat.

I have given so much space to the fundamentals of the wage system in order to impress upon the American employer what his problem really is: the offering of real evidence—the evidence of the thing as opposed to the evidence of the word—that the wage system is the best for the community at large. This is the problem squarely and frankly to be faced. And I emphasize this point because there is not lacking a desire to dodge it and to substitute phrases which no one quite understands but which sound rather well.

Under this head come most of the profit-sharing systems that are springing up like weeds all

over the country—the organization of foremen in committees to give them more power, when as a matter of fact they should usually have less power; and the formation of shop committees that have only the power of messengers.

These shells of remedies, these shadows of improvements, only imperil the whole wage system by providing arguments against its flexibility. For it must be borne in mind that some of the best brains in the world are now writing and talking against what they call "wage slavery." I am not concerned with the sincerity or the lack of sincerity in those measures which fail to answer the question in issue. I am not much concerned with the fact that an employer desires to benefit his workers; for that is a somewhat unnatural attitude which usually comes from an excess of paternalism born of having too much money.

The only attitude is for the employer to line up on one side and the employees on the other. The first will demand all possible work and the second all possible money, and then they will seek for a definition of the word "possible" and perforce be satisfied for the time being. What I object to in the half-measures is that they lack common sense—they hope to obscure the real issue. The true measure will meet the issue

and give a true answer, and that answer will give a working basis.

Profit-sharing does not adjust the relation—it only obscures it by trying to presuppose a relation that does not exist. The fallacies of profit-sharing I will take up in the next chapter; but now I want only to observe that the wages of capital and the wages of work have nothing in common and they can not be shared—they must be adjusted.

The fundamental proposition that the wages either of capital or of labor must be derived from work, and only from work, has had a severe shock during the war. The governments of the world, but more particularly of England and America, have, by the heedless outpouring of funds derived from borrowing, effectively obscured, in the popular mind, the true derivation of money.

The Bolshevists say that money is unnecessary in an ideal society; and they issue it as fast as the printing-presses will work, not under the delusion that they are financing, but with the deliberate intent of proving by the process of inflation that money is of no use, after all. They have so far succeeded that goods, and not money, is the purchasing power in Russia today.

Our own Government started with a different promise, but it has succeeded in convincing the more ignorant employers and employees that there is somewhere an inexhaustible fund which will provide wages and profits. The soldier has found himself well kept, and has seen millions expended as freely as formerly dollars were spent. The worker has found that his labor, or indeed his mere presence in the immediate neighborhood of work, is worth whatever he chooses to ask; while the manufacturer has generally discovered, and the exceptions are rare, that it is difficult to uncover a method by which he can lose money on war-time government contracts.

The socialists say that the State can do all things well, and the governments have tried to prove that, if they could not do all things well, they could at least pay for all things well.

There is no reason to believe that, with such a vast amount of paper money in the world, prices will lower materially for many years to come; each war in the past has moved the world to a new price level. We should be foolish to try to get back to pre-war wages or prices. The effort would only promote revolution. What we have to get back to is some relation between capital and labor—not the old relation, but

some new relation. Otherwise the two will cease to exist as entities.

The opposition to capital is usually on the ground that it gets more than its fair share. Does it? In banking, money does commonly fetch more than it should be worth and the profits of banks are higher than they should be. Even the Federal Reserve banks, which are supposed to be run at a minimum of profit, can not help earning fairly large dividends. Therefore, to the extent that capital demands two profits—one for its mere presence and the other for its employment in manufacture—it is greedy; and the anti-capitalist agitator is to some extent right.

But the profits of capital in manufacture are not large in ordinary times, and their elimination would not help the worker. If a company with a capitalization of ten million dollars makes ten per cent. upon its capital, the resulting million seems very large to the worker; but if that million dollars were added to the payroll of most concerns large enough to earn a million a year in legitimate business, the resulting increase in pay would not be very large. If the worker is underpaid he will bitterly resent this profit, and rightly. Why not, then, let the worker know how and why the profit

arises, and exactly what share he has in the making of it? If it then appears that he is underpaid, he should have more money.

I urge letting the worker know where he stands in the industrial machine. The same process will inform the employer where he stands—for often the employer does not know a great deal more about the process than do his employees, else we should not find small wage raises translated into very large raises in the price of the finished article.

It will help in the process of mutual education to dramatize the business by means of charts based upon exact figures. I do not usually advocate charts, because they can not go into sufficient detail to be of much practical help; but they do show tendencies and relations, and tell a story that the actual figures can tell only to the expert. These charts should show the cost of materials, the cost of labor, the cost of administration, the cost of selling, and the final profit, with a separation in each of the direct cost and the indirect.

It will then speedily be shown where economies may be effected. The waste may be in wages that do not represent work, or it may be in too great a shop burden or in too much for administration or selling—or it may be in all of

these sectors. But, in any event, the working is visualized, and a shop committee elected by the workers can discuss, with intelligence, the exact relations of the business.

I say a shop committee elected by the workers. To appoint a shop committee from the workers, or to appoint a committee of foremen or superintendents, does not get at the trouble at all. The idea is to let the men know what they are doing in the business, and this is not accomplished by a conference of their natural enemies—the foremen. A committee made up of foremen is merely another barrier erected between the top management and the men, and will be a source of unceasing trouble. The "self-government" that finds its sole expression in an assembly of foremen might be likened to a community governed in its every phase by policemen. If a man were arrested in such a community, he would have to go to jail merely to preserve "the honor of the force."

Since we know that a wage is not a fixed sum of money, but a relation, the full knowledge of the day-to-day working of that relation by the employees themselves is the only method by which they can be convinced of its fairness. The worker generally realizes that five dollars a day is no better now than half that sum was

before the war; but he does not realize that, by the same token, a company profit of two hundred thousand dollars a year is no better than a former profit of one hundred thousand dollars.

During the war several large banks were very successful with a plan by which a committee of employees each month set the figure of their wages according to the price index, and it would make for better understanding if the same idea were introduced into factories. If the people themselves fluctuated the wages, and knew why they were doing it, one great source of friction would be removed. And there will be no end of opportunities for friction during the coming long period in which the purchasing power of money will be unsettled.

And, while it is the greatest possible spur to the men to know that their fate rests largely with themselves, it is not at all bad for the management also to be put on its mettle, and to be compelled to show results to the men as well as to the stockholders.

No one who has had experience with representation as opposed to absolutism will ever return to absolutism. One of the best testimonials is that of Sir Albert Stanley, the President of the British Board of Trade, who had an experience of many years in railroad construction in Amer-

ica. Both of the instances he cites are out of his work in the United States:

"I was identified with two separate undertakings, one rapidly succeeding the other. Each of these undertakings had in its employ practically the same number of men—roughly speaking, about thirty thousand. One of the undertakings was, I suppose, really the last word in trade unionism. Every single employee was bound to accept membership in the union. The other undertaking was entirely free from that sort of influence. So far as I knew, not a single man identified with it had any connection with any trade-union movement.

"What was my experience of that?

"In the trade-union undertaking provision was made whereby any grievance could be brought forward and carried right to the very top, for the purpose of adjustment. It frequently came to my notice, as manager of that undertaking, that grievances on the part of the men had a real, genuine foundation. It frequently came to my notice that some sub-official was not justified by the facts in some action he had taken. As a result of the method which existed, many grievances were remedied.

"No such machinery, at least adequate and satisfactory machinery, existed in the other un-

dertaking. If there was any grievance, it lay smouldering beneath the surface and having no opportunity for adjustment. The result convinced me that, whether it is done by established trade unions or by securing the coöperation of selected leaders of men, whatever the system may be, it is absolutely essential for the successful conduct of a business in which a large number of men are employed that there should be set up machinery that will secure to the men an opportunity for bringing their grievances forward and securing them against punishment on the part of the officials."

Sir Albert speaks only of the negative side of representation. The positive is even stronger; for then the creative instinct, which I have discussed in previous chapters, comes into play —the men will not merely sit as a fault-finding body, but as a real constructive force. And as long as they know that they are getting a square deal they will not care how much the employer makes. The average employee is a fair-minded individual, who becomes unfair only when he thinks that he is being treated unfairly.

But why talk so much about money? Is the paying of money, and then more money, the solution for labor unrest? Not at all. The war has proved that money is not even the big-

gest factor; for the higher the wages, the greater has been the unrest. But no wage system can hope to survive unless there is a wage to support it, and unless in addition the recipients of that wage are satisfied that it is a just wage, and that it will increase as they have more labor to give in exchange. Therefore, if we remove the mystery with which so many like to surround the process of profit-making, we can demonstrate in the open that the wage system used is the best—the men can demonstrate the fact for themselves.

If an employer imagines that he can not let his employees know where and how money is made, then he is not prepared to combat, with facts, the arguments of those who oppose the wage system. Indeed, his mystery lends color to their frequently lurid statements and stimulates the desire to destroy capital.

The Russian employer thought that the secrets of profit-making were too full of import to be exposed to the gaze of mere workers. The workers, thinking otherwise, searched for those secrets with axes. They have not found them. But the employer is guarding his secret either in the grave or in a foreign land. Some one else is guarding his plant.

CHAPTER IX

WHY PROFIT-SHARING FAILS

"PROFIT-SHARING" is among the most alluring phrases in the language. Because it is so pleasant, it is used to describe the promised distribution of variously derived monies presumably in the belief that the worker recipient is the happier for the thought that he is getting money coming and going—that is, first as a worker in the form of wages, and second as a proprietor in the form of dividends.

I have already touched upon profit-sharing. Now let us see in greater detail whether it is a panacea or an irritant.

It is of historical interest to know that the first record of profit-sharing is found in the "Metayer system," which, starting some time in the thirteenth century, ran for nearly three centuries in England. Under this plan the landlord (it was an agricultural system) provided the land and one half of the stock; the tenant returned one half of the product. It is

of present interest to know that in the course of time the tenant thought that he was giving up more than the landlord was entitled to. He began to neglect the land, and finally the system went out of practice.

It is well to note that this very first record of what is called profit-sharing was a sharing not at all of profits, but of production, with the tenant taking the risks and the landlord the production. Then each cast up his accounts to discover how much of what he got was really profit —although the accounting methods of the time were delightfully simple: that which was paid in was a blessing, and that which was paid out was a misfortune.

The next historic case is that of Leclaire—a Paris painter and decorator. In 1842 he cannily calculated that if he could get his people to save on time and material he could add some seventy-six thousand francs to his profits. He proposed to his men that if they made those savings he would give them a share of what would otherwise be his individual profit. They did not like the idea and refused to try it out; but a couple of years later Leclaire managed to put the scheme into operation, and in the first year divided a dividend of twelve thousand francs.

In this case the workers were distributed on

many small jobs all over Paris, and the plan enabled the owner so to curtail supervision that the profits, and hence the dividends, were always fairly large. The staff never exceeded three hundred, and never therefore passed beyond the bounds of personality. Although the dividend was expressed as profits, it was really an economy bonus, and it had so great a vogue that the present owners of the old Leclaire establishment still keep it in operation.

The Leclaire method differed from the usual profit-sharing plan in that the workers took their money in cash. The owner had no plant upkeep to consider; he had no tools of great value—the workers owned their own tools. His function was merely first to get jobs, and then to finance them. The establishment of a reserve was a purely personal matter, and the items of depreciation and burden were trivial—in fact, as far as I can learn, they did not at all enter into the bookkeeping. The excess of income over outgo was profit.

But, as the idea of giving the worker a share in industry on the capitalistic plane spread, it became more common to distribute some form of stock or co-partnership certificates to them, and then they received dividends on these at a fixed rate or in some proportion to the amounts

paid on the stock of those who had invested money.

It early became apparent that any plan that promised a fixed percentage of the profits payable in cash was dangerous, because it did not allow for the building up of a reserve or for the exigencies of business. Out of two hundred and ninety-seven firms that adopted some form of profit distribution or stock participation in England, up to the opening of the war in 1914, only one hundred and thirty-two of the systems are still in existence; and of these forty-four are gas companies, which operate under a somewhat peculiar plan which I shall presently describe. All other firms either gave up their plans or went out of business from one cause or another. Take a few random notes from a roster of the profit-sharing in England—they are illuminating:

In 1832 Lord Wallscourt introduced profit-sharing among his workmen, and continued the plan until his death in 1849. His lordship's idea was to reckon every worker as the investor of as much capital as will yield at five per cent. the sum paid to him in wages.

In 1865 Henry Briggs, Son & Company, colliery owners in Yorkshire, adopted a profit-sharing scheme under which employees received

a moiety of excess profits (after ten per cent. dividend had been provided for). Extra bonuses were paid to men who invested in the company's stock. A workmen's committee was formed to advise as to methods of working. A workman director was elected in 1869. The system was abolished in February, 1875, in consequence of a wages dispute.

In 1866 John Curwen, a music printer of Plaistow, adopted a plan by which a moiety of profits over ten per cent. was shared with employees and paid in cash as a bonus on wages. The scheme was abolished in 1872 because profits had fallen and the men demanded an increase in wages to compensate them for the loss of their bonus.

In 1866 the South Buckley Coal & Fire Brick Company directed that shares to the value of ten thousand pounds (nominal) be reserved for their workmen. The company went into liquidation before it had earned any profits.

In 1866 the Cobden Memorial Mills Company, Ltd., of Sabden, Lancaster, reserved one fourth of share capital for the workmen, who were promised "one half of the surplus profits above ten per cent." This undertaking was unsuccessful and was wound up in 1887.

In 1866 Fox, Head & Company, iron-workers

of Middlesbrough, introduced a kind of profit-sharing which ultimately took the form of a dividend to employees of a moiety of all profits over ten per cent. It was abandoned in 1874 because trade unionists were debarred from profit-sharing.

In 1867 John and Henry Gwynne, engineers, of Hammersmith, agreed to divide among their employees (who were to be non-union men) a cash bonus equal to ten per cent. on profits. This was abandoned as unsatisfactory after three years.

In 1868 the shareholders of Prices' Patent Candle Company, Ltd., at Battersea, authorized the directors to distribute among employees one third of the profits above a minimum sum fixed by the company. In 1872 the employees demanded a nine-hours' day, which was conceded, and the profit-sharing scheme was withdrawn.

In 1872 Troughton & Simms, instrument-makers, of London, tried profit-sharing for one year, and abandoned it because the majority of the employees appeared indifferent to it.

In 1872 Spottiswoode & Company, printers, of London, adopted a profit-sharing scheme under which half of the surplus profits (over a fixed percentage) were divided among certain employees—an average of three hundred and fifty

in number. In twelve years nearly twenty thousand pounds was distributed. The plan was discontinued in 1883 because profits fell so low, in consequence of a rise in wages and increased competition, that there was no surplus to divide.

In 1872 J. Gimson, engineers, of Leicester, introduced profit-sharing, but discontinued it in 1879, when the profits fell below the minimum.

Beginning in 1872, W. Hill & Son, bakers, of London, "for some years" paid a cash bonus to its employees out of profits, but found no improvement in the men, and therefore abandoned the practice.

In 1873 John Thomasson & Son, cotton spinners, of Bolton, gave a cash bonus. In the fourth year following, the bonus was *nil.* The firm declared that improvement in work was also *nil,* and abandoned the scheme.

In 1873 Joshua Hoyle & Sons, cotton weavers, of Bacup, on conversion into a joint stock company, reserved a certain amount of stock as "industrial partnership shares," and advanced money to enable employees to purchase. The scheme was popular in prosperous times, but "with reduced dividends its popularity waned," and in twenty years it had fallen to virtual desuetude.

In 1874 Charles Rowley & Company, Ltd.,

carvers and gilders, of Manchester, allowed its employees to take up shares, and paid such an annual bonus on wages as "could be afforded." The system was abandoned in 1876, because many employees "took advantage of a rise in the market price of shares and sold out at a profit."

The foregoing are characteristic cases of the vicissitudes of profit-sharing enterprises in the course of ordinary business. They are largely taken from the '60's and '70's, when England felt the profit-sharing urge. I might give dozens of other cases; but if considerably more than half of the firms who have taken up the idea abandoned it after a trial of a few years, it seems safe to conclude that it is not a panacea. Of those who have kept on with it, the gas companies show the longest life; but with them the circumstances are exceptional.

The outstanding example is the South Metropolitan Gas Company, of London. Under an act of Parliament, the company is entitled to pay a dividend of four per cent., and to charge three shillings and onepenny per thousand cubic feet of gas. As an inducement to economy and lower prices, the act further authorizes an additional dividend of two shillings and eightpence per cent. for each reduction of onepenny

in the price of gas. That is, the dividends depend upon how cheaply the gas is sold. To help in this economy, the company agrees to pay each employee three quarters per cent. extra for each penny reduction in the gas price. The company has gone as low as elevenpence below the standard price, which means an employee's dividend of eight and one quarter per cent.

The percentage of bonus has been revised several times, and instead of paying in cash, one half of the bonus is now invested in the stock of the company and receives dividends on the same basis as that of the investing shareholders. The plan has been in operation since 1889, and there has always been a dividend until the war years, when, the price of gas rising to the standard limit, the bonus ceased. The history of the experiment is, therefore, not completed, because no profit-sharing plan can be said to have proved its success until it has passed through a period of "no profits." But it will be observed that in this case—which is always cited as one of profit-sharing—there is no real profit-sharing, but a bonus on economy. The men are not paid because of the profits; neither does the amount depend upon the profits: they are paid for the reduction of costs.

Another English scheme of considerable note

is that of Lever Brothers, the soap-makers of Port Sunlight, where, in addition to very elaborate welfare work, the firm has a co-partnership organization. After four years of service, any employee who is above the age of twenty-two years receives an allotment of certificates according to a rating of ability. Slackers get nothing, and enthusiastic workers receive ten per cent. or even more. New certificates are allotted each year until a maximum of from two hundred pounds to three thousand pounds is held—the limit depending upon the rates of wages. Dividends are paid upon these certificates in shares of the company, and the recipients may either sell these shares in the open market or retain them and receive a five per cent. dividend. If an employee leaves the company his certificates are canceled, unless he retires from old age, when he goes upon the pension list and receives five per cent. stock in exchange.

The many American plans that are in operation at the present time are variations of the English plans. In some cases the company sets aside a proportion of the profits and pays a bonus in cash; in others the payment goes into a fund, which is held until a certain date or contingency, or which is treated as an interest-bear-

ing deposit and the interest paid. In most cases there are provisions limiting participation until after a fixed number of years of service, and also providing for forfeiture.

It is not unusual for a profit-sharing plan to be in force among the executives of a company, or even among the superintendents,—I have in mind several cases where the shares of profit annually exceed the salaries,—but I do not include these plans because they have nothing to do with profit-sharing as a solution for labor troubles. Neither do I include the provision of facilities for the purchase of stock, as in the case of the United States Steel Company; for this is a matter of thrift promotion through investment, and is not profit-sharing: the man is paid on what he invests, and his interest is not that of the worker, but of the capitalist.

If you will examine virtually any plan of payment that goes under the name of profit-sharing, you will discover that there is little or nothing of real co-partnership; but, boiled down, the plan resolves itself into a gratuity system or, at the best, a bonus system. The workers who contribute their labor are never on a plane with the stockholders who put in their money.

The only real profit-sharing plan that has ever come to my notice is one which has been

operating for some years in Germany. The owner of a large optical instrument works willed the entire property to the workers. There are no stockholders at all. The various employees receive wages or salaries according to their abilities, as in any establishment; but at the end of the year the profits are divided per capita—the general manager gets a large salary, but his share of the annual profits is exactly the same as the office-boy's. That is real profit-sharing and real co-partnership. Yet it is decidedly impractical for adoption by industry as a whole.

What I object to in the average profit-sharing plan is a lack of sincerity. Instead of recognizing that capital and labor are different entities, each entitled to a wage, and that the problem is to balance that wage, the profit-sharing plans seek to obscure that relation by saying to the worker: "You are first entitled to a wage as a worker; and next you are entitled to a wage as a capitalist."

When the share of the worker is invested in the securities of the company—when he buys his way into the company—he does stand as a capitalist; but few human beings care to have their investments forced upon them, and, purely from an investing point of view, it would be better for him to have his surplus in some other

company rather than to stand or fall entirely upon the progress of his own concern.

In effect, in instituting the system the employer says to his men:

"The wage system has failed; your wages are not large enough. I do not know how to adjust them according to your worth, so I will say that you are responsible for the profits and will pay you a rake-off on them."

But what the employer generally has in mind is more like this:

"We are making big profits, and if your attention is called to them you will want higher wages. Instead of giving you those wages now, and perhaps running into a period in the future when profits will not be so large, I shall take your mind off the profits by declaring that they are yours as well as mine. I know that they are not, but I must keep you happy and at work."

As I pointed out in an earlier chapter, nothing is to be gained by dodging the relation of capital and labor. The trade unions dislike all bonus and profit schemes because of this evasive quality, and the only union man whom I have known to favor the idea is the English leader, Mr. J. P. Thomas, and he takes a very different ground from the employer. Mr. Thomas says:

"The basic element of profit-sharing is that, first of all, the worker receive at least a standard rate of wages. There should be no question as to that; therefore I do not see why trade unions should be at all opposed to the system. In addition to the wages, the income of the employee is increased by a share in any profit that may accrue.

"In profit-sharing or co-partnership the capitalist must yield the right of keeping all the profits for himself. He must not expect that Labor will cease to make demands for high wages, or that it will cease to organize or combine or belong to trade unions as freely as it desires. On the other hand, Labor must not expect that Capital will cease to manage, to administrate, to organize, and functionalize, or generally to conduct business."

The thought of this leader is that, after receiving the highest possible wages, labor is still entitled to dip into the receipts of capital, regardless of right, and probably in the way of granting capital the right to exist. The nub of the whole idea is that labor should have something out of all the money that is going about.

But suppose that no money is going about? Take the experience of Mr. Hugo Hirst, the

chairman and managing director of the General Electric Company in England:

"I have personally, as far back as twenty years ago, made my first attempt. My intention was to try it in a modest way, and if successful to extend it. I failed. In our then existing Articles of Association, I provided that ten per cent. of all profits, after an interest on debenture and preference share capital had been paid, should be given as a bonus to members of the staff. For three or four years it worked successfully; but it must be borne in mind that during those four years the company showed progressive results.

"About 1904, through no fault of the management, staff, or workpeople, a period of depression set in for the electrical industry. The net results of the company receded, with the result that those entitled to bonuses received less. With scarcely any exception, I met with dissatisfaction and grumbling. Every man protested he worked quite as hard, even harder, as the times were difficult, and each one assured me that the less favorable results of the company were not due to him, and each made a point that his mode of living, his expenditure, or his hope of saving were calculated on the bonus for that

year not being less than that of the previous year.

"The dissatisfaction and unrest created by the reduced bonus became so apparent that there was only one thing for me to do. I compounded the maximum bonus of each man with his salary, and stopped further bonuses to all members who were in receipt of a salary of less than four hundred pounds a year. The man receiving above four hundred pounds per annum I continued to give bonuses, but at no fixed percentage. The bonus was an amount given at the discretion of the directors, in accordance with the result of the particular department in which the employee was working, leveled up or down more or less generously, according to the results of the year as a whole."

Take this very able exposition of the essential unsoundness as given by Mr. J. W. Sullivan, of the International Typographical Union:

"Uncertainty is a disturbing factor in profit-sharing—uncertain as to whether there ought to be profits from year to year, uncertainty as to what the profits actually may be in any one year, uncertainty on the part of the employees as to the employer revealing his true profits, uncertainty as to the settled proprietorship of the es-

tablishment. In these uncertainties it is seen that the interests and expectations of a force of laborers are constant,—the highest obtainable level in wages, hours, and working conditions,—while the purposes of coming and going employers are variable, including selling out, either at a sacrifice or at a boom profit.

"In this unsettled profit-sharing there usually can be no hand-in-hand partnership of Labor and Capital. The two interests work strictly apart, each in its accustomed sphere. Capital sees an opportunity, undertakes an enterprise, buys site and plant, decides upon the scale of productions, manages the workshops, watches the markets, pushes sales, enlarges or diminishes the works, runs the risks—in all respects making the mistakes or supplying the strokes of talent that count in management. The industrial wage-working employee, while supplying the essential factor of more or less skilled manipulation of matter resulting in concrete production, projects no effort into the field of plan, production, purchase, and distribution."

My own observation of profit-sharing exactly coincides in practice with the experience of Mr. Hirst, and my theory with Mr. Sullivan. I have yet to discover any plan that did not fail when the profits ceased to exist, or even when

they diminished; and those plans that have operated through many years—and there are such—will usually be found to depend upon the continuous success of some specialty business or upon the personality of the owner. Profit-sharing can not be a panacea, because only twenty per cent. of commercial adventures show a profit. Before one can depend upon profit-sharing to adjust labor trouble, one must be assured of a profit. How many concerns will tie themselves to a plan in which they are bound to guarantee a profit forever and a day?

If, then, profit-sharing is not a panacea, is it an irritant?

My own experience is that any periodical payment that is not directly connected with the work in hand is somewhat of a mystery to the average worker. He does not know how or why profits are made. He does not understand how it can be that, after he has done his work well, a drop in the market price of raw material may compel his firm to sell at a price lower than cost. And he will not readily consent to a depreciation in his own earnings because of this outside happening.

I recall one company that lost money by selling too much in distant markets where the packing and transportation absorbed more than the

profit on the goods sold. Should the worker who made those goods be penalized for an executive's dearth of accounting acumen? Or why should the worker in an establishment loaded down with too large a mortgage be at a disadvantage with the man who is employed in a place that has no funded debt? The interest on the debt has to be paid before profits can be calculated.

Or, again, why should a premium in the way of labor payment be given to the concern that does not set up proper reserves? A company setting up reserves will not be able to distribute as much money as the improvident one—but it will last longer.

The worker takes his share of profits or bonus as an addition to wages, and he fixes his standard of living in accord with the highest rate, making no provision for a lower rate. As long as the rate keeps up, he is content to take the money; but he is bound to be troubled, and hence dissatisfied, when the rate goes down—and if the scheme is honest the rate must fluctuate. War years can not last forever.

When the rate does go down he is fair prey for the agitator; and because he does not understand why or how the profits were made, or why

or how the losses were incurred, he is ready to believe that he is the victim of some game.

I take it as axiomatic that any remuneration of a fluctuating character, and derived from a source unknown to the recipient, must be a cause of eventual trouble.

Is it not better to meet the real question squarely?

We all know that the efficiency of labor is only one of the several factors that go to make up successful business. It is the most important factor in that, if the labor situation is right, it will take some masterly stupidity to lose money. But masterly stupidity exists—and always will exist.

The worker should be paid, not a share of the earnings of capital, but for his contribution; and he is not entitled to have his contribution lessened or augmented in money value by reason of any force outside of himself. That is, he is to be paid for what he does, and not for what any one else may do for him. If the company dividend is very large, the wages probably are too low. But if that great profit is due solely to exceptional managerial skill, then it is capital, and not labor, that is entitled to the reward. And if labor knows how and why that profit

was made, it will be content with its reasonable, fair share.

Because profit-sharing is a term, and not an actuality, it can not satisfy. Any plan that is ill founded in theory is destined to fail in practice, and I have always found that the monetary rewards paid under the guise of profits produce neither the production nor the contentment of money that is frankly paid for what it is. If you pay a man for the quality and quantity of his production, or for the amount that he saves in production, he knows the reason for his money, and he knows that it is up to him to make more. He does his work and he gets his reward. He gets the reward so nearly coincident with the work that there is no loss of connection between the two. Before him is something definite—the exact reward that he will have for a certain service to capital.

But under any scheme of profit-sharing the profits can not rightly be ascertained oftener than quarter-yearly, and are more accurately calculated on an annual basis. Few men can associate their work in January with a payment in the next July or January. There is no incentive, in the average worker, to labor hard today for some coins that he can not see for six or twelve months and the number of which he

can not know until then. The company dividend and his own work have no connection, and, because of the many other factors entering into that dividend, they can have no dramatic relation. Hence he works without the idea of any extra payment in mind, or, if he does have it in mind, he will soon get it out of mind when he sees his fellows doing poor work and yet expecting to get the same extra payment that he gets. The natural impulse is to drift into mediocrity.

Under a wage system the results are to be had by adjustment—by taking the proper representatives of the workers into confidence and frankly discussing all the facts. In most profit-sharing plans the employer is not fooling the workers; he is fooling himself. The worker will be around for more wages the moment that the share of profits drops—and he will be around in no happy mood.

CHAPTER X

STRIKING THE BALANCE BETWEEN CAPITAL AND LABOR

In an earlier chapter I pointed out the necessity of clearly comprehending that a solution of the difficulties between the employer and the employee is to be had only in the scientific engagement of capital and labor.

First let us define "scientific." The science that I mean is the application to the particular set of facts of the knowledge gained by systematic observation, experimenting, and reasoning, and the further coördination and arrangement of that knowledge in view of the facts gained in the particular investigation.

I can not too strongly emphasize that the scientific engagement of capital and labor is not the pressing of either of them into some mold already made. The old medical practitioner examined his patient, let forth a torrent of learned gibberish corresponding to the incantation of still earlier times, and then always decided to let some blood. The palaver was whatever he hap-

pened to have on his mind at the moment; the remedy was always the same—whether the patient had smallpox or gout. The best of the modern practitioners have no jargon and no fixed remedies; they make a most careful diagnosis with the aid of the laboratory, and then go forward, usually somewhat slowly, to the correction of the specific diseases or derangements indicated. Only the quack prescribes the same remedy for every disease.

It is the same with the prescriptions for industrial diseases: there are no sovereign remedies—there is no one bottle to dose from. Instead, the remedies are to be applied only as the diagnosis proceeds, and then gently, ever with a readiness to acknowledge a mistake and to make a correction.

I marvel at the temerity of those who instal a system one month and get out a pamphlet on its perfection during the next month. Adjustments of value are not made in any such fashion. Of course, the first distribution of profits is always a success—so is the distribution of Chrismas turkeys or any other largesse. It takes a genius to achieve unpopularity while in the act of giving something for nothing.

What we are aiming at is the proper rewarding and mental stimulation of both capital and

labor, so that the two may function together to the best advantage and exert a maximum of brains and brawn.

The definition of science and the statement of the object dismiss at once the possibility of having a rigid plan, and emphasize the desirability of having only a few guiding principles, about which the knowledge gained by investigation is to be grouped.

Each industrial unit has an individuality and a personality, which are to be studied and treated on a purely individual basis. In one town I had as clients four plants, each making precisely the same article; but the varied personalities and traditions of these factories compelled me to devise four quite dissimilar plans in order that each company might have the ultimate in resource. In the course of time those four plants may come around to more or less the same methods; but had they been forced into identical molds at the outset, each would have lost some features that were worth preserving.

I am not an advocate of that sort of revolution which overturns the good and the bad together, and neither do I believe in the elimination of individuality through drab uniformity. Most people, for instance, are comfortable in

low collars; but there are not a few who like tall collars. It is quite the same with industrial organizations.

Insisting that all wear the same height of collar—presumably an average height—merely means that no one will be quite comfortable.

In the proper scheme of industry, the vital force of individuality, both in the employer and in the employees, is to be fostered and not curbed. When we curb individuality we also stifle originality, and make for a dead level, such as England was threatened with before the war, on account of the equality notions of the trades unions.

The principles do not change, but the application ever varies. The manufacturer who examines into any successful plan in the hope that he can buy something ready made and fit to wear is bound to have his trouble for his pains. It would be a calamity for him to take a ready-made plan, even though it did offer the alluring inducement of being capable of being installed overnight and without further thought. Another type of individual may examine a plan and dismiss it with the usual "Yes, it seems very good; but my business is different."

Neither man has the right view. The plan could not be good *in toto* for the first man, but

it will certainly have some features that both men might well study. The real search should be for ideas, and not for plans. The ideas are but clay—raw material for the modeler to spend many hours with. The ordeal of clear, constructive thought is not to be avoided.

With this introduction, let me describe two very dissimilar experiments that I now have in process. They are both intentionally being kept plastic, to admit of changes as events seem to require. They will serve to illustrate not only the necessarily "catlike" approach, but also how the "labor problem" ramifies through every branch of the enterprise. In each case the fundamental thought is eventually to gain a working arrangement between the men and the company that will seem fair to each.

The first case is that of a machine-shop manufacturing automobile transmissions. The customers are a few large concerns that will take any amount of output, provided the prices are reasonable. This is a clear case of production controlling profit. The contracts cover long periods of time, and altogether it is a production rather than a selling adventure. It is essential at the beginning to determine whether the factory or the selling force controls—not for the purpose of rewarding the one and neglecting the

other, but to discover what is the real motive power.

An automobile, for instance, is a mixed manufacturing and selling proposition; you can not continue to sell a poorly made car, but neither can you find a broad market for a first-class car unless it be well sold. Ordinary canned-food products are selling propositions; the qualities vary to a great degree, but almost any canner, with the will, can get out a first-class article—it is the manner of selling that brings the sales.

This plant had the usual run of local labor troubles—high wages and poor performance, a great deal of spoilage, and, consequently, a small profit. The labor turnover was high, but no bad strikes had occurred.

The problem I faced was:

(1) To make more money for the owners without raising the price of the product beyond that justified by the current cost of labor and materials.

(2) To enlist the interest of the workers so that they would put themselves into the work and realize the first proposition.

To be perfectly frank, I did not start with any idea of creating an industrial Utopia; there was

no propelling force other than enlightened self-interest. If the company were to achieve success, then every person working for it must also achieve success. That is, the company's people must have a good reason for putting their brains into the works. The best reason would be the joining of every person, from president to janitor, into a scheme by which not only individual but also community efforts would be rewarded adequately. The adequacy could not be established by assertion alone, but by the reasoned consent of the majority of those involved.

A detailed analysis of plant expense over a period showed that the overhead, or shop burden, per hour of productive labor was exceedingly high. The overhead was high because the efficiency of the productive labor was low. The men were largely on piecework; but there is no greater mistake than to suppose that simply because piece rates are in force the owner is only "paying for what he gets." Unless the rates are well set and the worker knows how to do his work, the owner will be paying for a lot more than he "gets," for the shop burden will be unduly large per unit of production.

The first step, then, was to ascertain the exact costs per unit of production and the percentage of overhead to the productive labor hour. The

second was to teach the men how to do their work.

My engineers took certain individuals and explained to them exactly what we wanted to do in the way of bettering their ability to make wages.

Take a typical case. This workman was on a simple assembly, and did an average of four a day, at the rate of eighty cents apiece. We thought that he could as easily do ten a day, and we told him that he could do the ten without additional effort. To him the additional six meant more money. He said he was willing to try.

We had ten sets of parts placed on his table the next morning. He performed in his usual manner the first three formal operations upon the castings. The fourth operation consisted of drilling four 3/64-inch holes in each casting. He picked up a casting (weight forty pounds), and started over to a drill-press twenty-five feet away. We stopped him, and sent for a portable drill. He had never tried the portable, through fear of breaking the drills. Our man drilled several holes, and then the workman did likewise—in one quarter of the old time.

Another operation was the affixing of brass locks. This workman had formerly gone to the stock-room for them. We had them brought to

him, thus saving more time. After each operation the process was talked over and unnecessary movements eliminated. In spite of the time consumed in explanation, the ten assemblies were finished and on their way to the paint-shop at five o'clock—although formerly he had just been able to finish the four by five-thirty!

This man thought that a new rate of thirty-five cents would be right for the assemblies under the improved methods. We made the rate forty cents, so that if he made ten a day he would earn eighty cents more than under the old schedule. Within a short time he was averaging thirteen a day, and with less effort and fatigue than before—and he was constantly on the lookout for ways further to increase his production without affecting its quality.

The overhead cost on this man was forty cents an hour, or four dollars a day. Making four assemblies a day at the eighty-cent rate gave him a wage of three dollars and twenty cents, and a resulting cost to the company of one dollar and eighty cents for each piece. When he made thirteen assemblies a day the burden expense was no greater, but his wages were five dollars and twenty cents, while the cost per assembly

to the company was only seventy-one cents. This is why intelligently high wages pay.

My engineers went through the whole factory in this manner, selling our ideas as we went, not forcing them forward, and making sure that no man made more money simply by forcing. The extra money had to be earned by greater skill—by eliminating waste, not by merely adding brawn. Nothing is to be gained by inducing spurts.

We did not at the outset take up these matters with shop committees, because the circumstances were such that the selling of a few men (such as the man I have described) helped to sell the whole force. Had there been opposition we should possibly have worked up through committees; but it is better to educate the people and fix rates ahead of the formation of rates committees, so that when those bodies do come into being they will already have a knowledge of rate-fixing and waste elimination.

Thus far I have discussed the remuneration of the worker as an individual, and have not related him to the company or to his fellows. I am not in favor of making individual compensation depend solely upon community effort. If all but two or three of the men in a group are

diligent, then the indolent will be forced forward by joint rewards; but if all but two or three are indolent, then more probably the industrious ones will slack down to the lower level. I am in favor of stimulating both the individual and the group whenever possible, and in this case it was possible.

Now for the community reward. The individual can not do his best alone. Materials must flow to him, machines must be cleared, and processes ahead of his must be well performed. If preceding operations are ill done it will take him longer to do his own work. It is not wise to create an antagonism between departments on account of the bonus, and some antagonism is bound to result if one group's share happens to be cut down because of absences or slackness in another group. This is the ever-present danger in having the community bonus of one department depend wholly upon the work of another. You will recall how a volunteer fire company, in the old days, paid more attention to a rival company than it did to the fire. The same sort of thing may happen in the reckless encouragement of inter-department rivalry.

The community reward within a department is obviously based on what it accomplishes. The exact measure of that accomplishment is

the excess of production or quality over the standard. In the factory I am considering the standards were fixed in the course of the rate adjustment, and were thus already in hand. Suppose the individuals of the department so exceed the standard as collectively to earn a bonus of three hundred dollars. The departmental pay-roll is one thousand dollars, and the overhead expense is one hundred and fifty per cent. of the pay-roll, or fifteen hundred dollars. To the individually earned bonus the company adds a collective bonus. The overhead does not go up, and the company can easily afford to pay an additional three hundred or six hundred dollars in all for the large increase in production—as was demonstrated in the man making the assemblies.

It is quite common in sharing a collective bonus to consider only one class. Sometimes only the executives share, while again only the workers share. But no one class alone makes the increases. Why not, then, reward according to contribution? The workers already have three hundred dollars for themselves; give them one half of the additional three hundred dollars, and distribute the balance to those whose planning and foresight enabled uninterrupted work to be done. To further inter-department ac-

tion, I reserve a small part of the administrative bonus for the preceding department, because it puts the work through so expeditiously as to permit the second department to function to the limit. Since the succeeding department would also pay a backward-looking bonus, the income and outgo would, roughly, cancel each other. But the principal point is that the so-called non-productive workers in a department, such as the foremen, the booth-men, and the truckers, who make good work possible, should share in the reward.

Thus all of the departmental people, in one way or another, have had a cash incentive put up to them and the opportunity given to earn, over and above a guaranteed living wage, a sum sizable enough to make effort worth while. The next in line are the forces of general administration. They too must have a reward, for without their skill and planning the workers could not exert themselves. The more one studies business, the more the fact stands out that the different departments of any concern are very closely related.

I find it possible to assign many of the sections of the administrative force directly to production divisions. The tool-room, for instance, shares in the administrative bonus of

such departments as it serves, and thus has a direct incentive to see that proper tools, of the right quality, are quickly provided. The apportionment of the tool-room is to groups where the battery arrangement exists, and on a percentage basis where the machines are of various kinds. Whatever the disposal of the machinery, some right basis for the share of the tool-room can be easily found.

The store-room is treated in similar fashion, and so on, until finally the only administrators not taken into account are the superintendent, the central planning department, the cost department, and a few others, comprising all together a trifling proportion of the whole factory force.

A factory administration may be said to be successful if the subordinate departments are successful, and not otherwise. It is logical to pay them upon the total factory bonus. They get a percentage on the whole bonus earned by the entire factory distributed in proportion to wages; that is, the proportion that each wage bears to the entire administrative wage.

On the cash side of the wage relation, still another factor remains, which is important—the wastage. The particular concern that I am reviewing does not pay for work that is rejected;

bad work, therefore, carries its own penalty in so far as the worker is concerned. And what he loses is a community as well as an individual loss. In another situation it might be desirable to arrange a quality bonus and pay on the quality; but that does not happen to be the best plan here.

The mere withholding of pay is not enough. That prevents a loss in actual wages paid, but the overhead goes on just the same, and the company is out the material and the wear and tear on the machinery—the company has gone through all the motions of production and stood most of the expense, but has nothing to show except a damaged and unsalable article. Which brings up the salvage department.

This department is one in which ingenuity counts to a large degree. If work worth at cost two thousand dollars goes over to the department and it manages to get one thousand dollars of good product out of it, obviously it is to the interest of the company to pay a bonus calculated on the value of the work saved. My staff contrived such a bonus, and further divided it into sections, as in the case of the departmental production bonus, and pays a part to the administrative side exactly as before.

But one material point remains. The worker

can save by producing more with less labor and overhead cost per unit. He can also save by the economical use of supplies, such as oil, waste, tool steel, and the like. Our analysis of expense gave data for a normal and for an abnormal expense, and from these we erected a standard. If the department went below the standard it gets an additional bonus. It makes a difference to the company what the market cost of supplies happens to be, but it is part of the duty of capital to stand the loss on the market as well as to make any profit therefrom—as has been previously pointed out. The workman can not control the market, but he can control his own waste in supplies. His reward for such control is not to be denied.

Thus far I have described what is little more than the accounting machinery to reward effort. It remains to be seen that the rates and percentages and bonus awards, as provisionally set during the experimental stage, are not only right, but that those affected by them think that they are right. And here it is that representation counts; for no plan is good unless it has features for insuring continued satisfaction. Representation is the best insurance.

The point of first conflict is commonly the determination of what is and what is not good

work—the inspection. Most workers consider inspectors as their natural enemies—as cavilers set up by the management to defraud honest men. The quickest way in which to cure this feeling is to ask the workers in each department to form committees of their own, and to decide disputes for themselves, giving the right to remove an incompetent inspector and elect another. The cases in which they will elect a man who promises to pass bad work are so rare as not to be worth consideration. The men will kick at a representative of the boss, but not at one of their own number. The chief danger is that their appointee will lean backward in an effort not to appear to favor his friends. This contingency is provided for by an appellate committee of the whole works to whom serious differences may be taken.

Starting with the inspection committees, we have gone forward to committees on rates, on discharges, on complaints, on efficiency, and on absences, and are now working toward a kind of plant congress in which all plant questions may come up. I thoroughly believe that power should be released only as the people are ready for it, and not all at once. The gradual evolution toward the democratic ideal preserves in-

terest in the progression, and thus makes for success.

It is too early to say how great is the success in this plant. The exactly set piece rates and the bonus payments have resulted in a wage increase of about forty per cent. to the individuals, and at the same time the production has increased in an even greater proportion. The quality of the goods is better, and their cost is so much lower that the company can, when the time comes, cut its sales price considerably without asking that lower wages or rates be taken. But what is more important is that the labor turnover is negligible, and the men are deeply interested not only in their work but in the general advancement of the company's interest. They have a real partnership with the company—one based on work and not on a passing sentiment. I think that they will go far.

The other installation I set out to describe is also in the experimental stage, and therefore also gives a splendid opportunity for the full play of ideas. It is as different as possible from the machine-shop, and serves to illustrate how perfectly illogical it is to imagine that one kind of system will do for any set of facts.

This company, which is of fair size, manufac-

tures paints and varnishes. Its trade is seasonal, and it has many salesmen and thousands of small accounts. Good paint is good paint. One good variety differs so little in actual merit from another that it is the sales organization, and not the factory, that makes for success. Unless the selling (which includes the advertising) is of the best, the factory product will not be disposed of.

The quality of the paint is naturally affected by the character of the mixing; but carelessness does not so often take the form of making an inferior paint as of using too much of an expensive material. In good planning the quantities to be used should not be left to the mixer, but should be arranged in advance by the chemists or the store-room. In the making of paint it is the material and not the labor cost that is of the highest importance.

The individual effort is so slight that it is not worth while to work out individual incentives, as in the machine-shop. Instead, my engineers have arranged a collective departmental bonus based upon the standard of production, and an additional bonus based upon the economy of operation. The first bonus is too complicated to be detailed here, because the standards are very numerous and take into consideration the

size of the orders going through, the kinds of containers, the recoloring, and a number of quasi-technical and technical points. The workers themselves have proved of great help in the setting of these standards, for they have brought to the task their peculiarly expert knowledge.

A part of the departmental bonus is paid to the administrative divisions, just as in the case of the machine-shop, and is distributed in the same manner. In the machine-shop we have not the problem of seasonal production, but in the paint plant the production is wholly seasonal and the cost of the material is so great that the interest upon stored goods amounts to a considerable item. This concern is now storing goods (having adopted the principle that twelve months' work must be given to the men), but only time will demonstrate whether this is the best way. It may be found cheaper to pay the men for doing very little during a period in which they will not receive a bonus—for the production will be below the standard. They would, however, get an extra bonus in the busy seasons, and thus their year-round wages would be satisfactory. At no part of the year would they be without at least a living wage.

Since I am presenting a going experiment and

not a finished thing, I am frank to say that on this point my mind is open. The workers themselves and the sales department, acting together, will probably solve the problem.

Where and how does the sales force fit into the scheme? This will be developed in the next chapter.

CHAPTER XI

THE SYSTEM OF REPRESENTATION

THE exact position of the salesman in the industrial relation is anomalous. Until recently far too much stress was laid upon selling, and in some specialties the selling expense was out of all reason. The motor-car industry at first got into the hands of salesmen, and the market was flooded with cars that were made to sell and not to run.

The former tendency to over-reward salesmen and to neglect factory people is now changing into a tendency to neglect salesmen and pamper the workers. It is far easier to-day to hire a good salesman than to hire a first-class mechanic. Then, too, salesmen have no organizations; they do not strike, and they will often stand an amount of abuse from a sales manager which, if duplicated in the shop, would result in a general walkout.

The real reason for the neglect of the salesman is that he became an economic absurdity. Trade was getting to the point where sales man-

agers and advertising agents would state in all seriousness that the entirety of business was selling, and that, given a sufficient appropriation and enough "pep," anything might be "put over." We now know that there must be a mutuality in any trade if it is to be continuously worth while—that the article has satisfactorily to meet a need or a desire. Hence the salesman does not have to "put over" anything, but is merely a medium for bringing the producer and the consumer together. Making something "to sell" bears the same relation to real industry that fake oil stock selling does to legitimate finance.

Our present scheme of distribution is very faulty. There is no reason why an article should double in price between the factory and the ultimate consumer—as the average article does. Therefore, though the position of the salesman is not a settled one, in the present scheme of industry he has a place, and a place of great value.

The line between selling and manufacturing is not drawn taut. For example, the air-tight package for biscuits is both a selling and a manufacturing proposition, and so is the sealed container for ready-to-use handkerchiefs. In paint the consumer at retail will probably buy

the best advertised and most conveniently packed article. On the other hand, the purchase of a milling-machine will be governed by performance rather than by appearance.

The true duty of the salesmen (and advertising is only the salesman with his talk in print) is to distribute the factory product to the best advantage, by presenting the good points to the largest number of people, and to advise the factory if the product is not meeting needs or desires. As a link between the producer and the consumer the salesman is essential in industry.

The sales force is not a thing apart and quite unconnected with the factory. The two are supplementary, although, as I pointed out in the preceding article, one may be vastly more important than the other. Their coöperation is essential. Delayed deliveries and defective goods will undo the work of the best salesman, while poor selling will leave the factory with no orders to fill. Again, the salesmen may oversell the factory, and, although this condition may be one of pride to the sales manager, it is disastrous to the company, for the consequent delays will make subsequent selling very much harder.

I know of a president who desired to gain con-

trol of his company. The opposing forces were centered in the vice-president, who was in charge of production. The president, who was a marvelous salesman, deliberately oversold the factory to such an extent as to enable him daily to protest to the vice-president that the company could not go on unless the productive departments became more efficient. Eventually he so harried the vice-president that he sold his stock and resigned. Then the president readjusted the balance between sales and production.

In progressive companies the production people are nearly always present at sales conventions. That the sales and productive divisions must coöperate is now a recognized principle of good business; but it is not generally recognized that the best coöperation is to be had by the organization of the salesmen on the plan of representation, on the same lines as the shop committees, and having the sales committees with a further representation upon the general representative bodies, which may be created in the evolution of shop autonomy.

The sales manager who declares that the sales force is the whole thing in the business is often the man who is the readiest to discharge a salesman; and there is a race of sales managers who pride themselves upon not keeping "dead ones"

—a "dead one" being a man who does not turn in all the orders he should. In the case of the factory we have seen that slovenly work is usually the result of bad management—that the average worker, given a proper financial incentive and a proper pride in his work, is a good worker. By the same token, the average salesman, if given the right incentive and pride in his work, will be a good salesman—perhaps not a star, but sufficiently capable to create a valuable good will for the company.

How, then, are the salesmen to be brought into the general scheme of remuneration and government, as described in the preceding article in the case of the machine-shop and the paint factory? Since the machine-shop example was taken because it presented so many production features in strong relief, and not at all for its selling side, it need not be further regarded. But the paint company depended largely upon selling. Its sales problems were immense, and it operated against many strong competitors of national reputation. All paint manufacturers have, in addition, keen local competition—for it does not take much capital to mix paint or varnish.

The company sold paint and varnish in many forms and to many different kinds of custom-

ers; it sold in small containers for the retail trade and in bulk to contractors and industrial plants. The method of packing has a considerable influence upon the price, and the fluctuations of the price of raw materials makes the price of the finished product vary almost from day to day. In large sales the price does vary from day to day, and, in making contracts over long periods the company had to calculate against the loss of a rising market—just as does the manufacturer of cotton, belting, or any product that contains so great a proportion of raw material as to make it responsive to the commodity market. Again, varnishes are more profitable than paints.

With all these facts in mind, the payment of the salesman upon any commission basis calculated on the precise profit of the particular sale was out of the question. The bookkeeping of any such system would be enormous, and the agent's end would not be satisfactory, because his profits would fluctuate. The principle that the reward should be for effort holds here. The risks are those of capital and not of labor—for the salesman is a laborer, even if he does wear a white collar. A straight commission or a bonus upon the dollar amount of sales would be wholly unscientific. The worker is paid upon the de-

creases that he makes in the cost of production, or, to put it in another way, in the opportunities that he creates for profit. The salesman is to be paid upon the profit that the company makes upon his sales.

The gross dollar does not represent profit. A line that is very easy to sell may and probably will bring a small profit, while another line will carry a large profit. The company may even have leaders, which it sells at little or no profit just as "business-getters"; those will be exceedingly easy to sell and, upon a gross percentage, they will be the grades sold by the man on the road, for they represent to him the largest return for the least expenditure of effort, and in this make his best interest opposed to the best interest of the company. The right way is to make the interests identical, and in the paint company this was done by a point system.

For instance, a varnish on which the company profit was twenty per cent. carried eight points, while a paint with a twenty-five per cent. profit carried only two points. In all, twenty classes were thus formed. Instead, then, of posting the sales records merely in dollars, they were also posted in points, and the salesmen were paid on point values. Beyond a certain number of points the company could well afford, as in the

case of the worker going above the standard, to pay a bonus. This, in turn, becomes something in the nature of a sales quota.

It would be obviously unfair to put the same bonus point in all territories; for a poor salesman in a thickly populated section would have no trouble in selling always above the quota, while a good salesman in a sparsely settled territory would hardly ever be able to attain the quota. In fact, the second territory might have been entered with the expectation of a loss for several years. We therefore set reasonably high, but attainable, standards for the good territories, and give lower figures to the less developed sections, with the understanding that the lower standards are to be raised as those territories become better sold. We try to insure that effort and not luck will determine the individual sales incomes.

The value of points and the fixing of standards are quite as fertile a field for dissatisfaction as the settling of factory job rates and standards, and here it is that representation plays its great part. Instead of the sales manager fixing the values and standards at his own discretion, the initial values are set subject to review by an elected committee. A further committee had been elected to adjust all disputes

other than those concerning rates, and other committees will doubtless form as the needs arise. The plan is, not to force committees, but to let them grow out of specific situations. Eventually the sales-people will elect representatives to a general legislative body, which will come into being as the representative plan grows.

In the sales department the men on the road may be considered as the productive labor, and the office people as the unproductive. It is the planning and backing up by the non-sellers that helps the sellers to do their best, and these non-sellers should also have a reward analogous to that shared in by the factory administration. Hence it is planned to pay them a bonus based on a percentage of the bonus earned by the active salesmen, and thus the interests of the office and of the sales force are made identical. Often a lack of harmony exists between these two branches; but having a common object measured in money tends to promote harmony.

I have condemned profit-sharing except among those who so managed the capital as to make profits or whose mismanagement prevented profits—that is, the president and other high executive officers who have no direct connection with any department, but upon whose

policy the increment to capital depends. These men should share in the profits of the company as such. In both the machine and the paint companies the same plans are being carried out.

In each case seven per cent. of the net profits are set aside for the stockholders, and then a percentage taken for the executive officers and their personal staffs. This percentage is not fixed, but depends upon the expected earnings of the company, just as does the dividend on the common stock. The men higher up know the why and how of profits, and are in a very different case from the workers or salesmen; they are the actual managers of capital. I do not favor a fixed percentage of profit for each individual—say fifteen per cent. for the president, ten per cent. for the vice-president, and so on; for executives are to be rewarded, not for the work they do, but for the success that they achieve, and, no matter what work they have done, they are not entitled to an addition to salary unless they have made money for the company. They are in quite the same position as capital itself.

Further, the individual percentage system causes an additional cut into capital's profit, with the addition of every new executive. The incentive should be to keep down rather than

to increase the administration expense, and, if the percentage is taken as a whole and then apportioned according to salary, the executive effort will be toward keeping down the number of people who must share in the executive profit—incidentally keeping down overhead. A new man will not be taken on unless it is pretty certain that he will add enough to the company profit to cover the share that he will receive from the joint fund. There is small danger that the executives will try to get along with too little assistance.

I have outlined two specific plans that are in operation, and that are, to date, entirely successful. Both companies are without labor trouble and have gained in production and in profit. All of the members of both companies are making more money than they ever did before and more than other people in similar positions.

"But," some one will object, "these are but experiments. It is my policy never to experiment. I leave that to the other fellow, and then cash in on his mistakes."

I know that type of intellect very well. Not long since I had the general manager of a company say to me with conscious pride:

"I am sixty years old, and it has been my rule never to accept a theory. I never deal with

anything but facts. I have never tried anything until some one else has proved it."

I am sorry that I had to make the answer which I did, because it hurt, and it is not nice to hurt an old man. I simply had to state the truth. I said:

"Is not that the reason that your company has been slipping back for the last ten years?"

At the present time all of us who are in industry are trying experiments of one kind or another. The most dangerous experiment is to wait around until "things settle down."

The mind that insists upon all facts and no theories is out of place in the industrial world. Certain fish of positive and non-theoretical natures may be caught in cornucopia-shaped nets. They will enter the seeming horn of plenty, and, having a fixed purpose, will not permit the slight impediment of the net to alter a preordained course. They bump and bite at the strands in regular "he-man" fashion. It never occurs to them to go back and go around. Industry holds plenty of people with these fishlike perspectives.

Or, again, some one may object: "This is only efficiency engineering dressed up a little."

It is "efficiency engineering" in the right sense, but not in the common acceptance of the

term. I share the feeling that an "efficiency engineer" is a dangerous person, and I have seen the ruins of their work in many sections. The useless card records and filing systems that encumber offices throughout the country would, if sold, go quite far toward paying the war debt.

Real engineering efficiency is something different. It is to be had in ways many of which are so simple as to suggest the "I never thought of that" cartoons.

For instance, in a certain preserving factory the women were taking the "eyes" out of pineapples with the same eight-inch knives that they used for the paring—and the executives wondered why the process was so slow and costly. A short knife for the digging work was all that was needed.

The engineering department of a works specified that thrust collars were to be made of machinery steel. These collars came through in lots of five hundred and sixty, and they cost $2,247.20 for material and fabrication—the machining was a costly process. The suggestion that castings be tried out started a series of experiments, which demonstrated that the castings had all the necessary strength. A lot made from castings costs but $1,433.60—clear saving, which it does not take an accountant to estimate.

Another machine-shop employed twenty-two men and a foreman in the janitor force. These men were supposed to keep the place clean, but they did not. They roved about the factory, sweeping whenever some foreman complained about the condition of his floor.

Our engineers divided the factory into areas, and made a study of the time it should take to sweep each area—some required more and others less cleaning. Then the areas were apportioned to the actual labor involved, and the men in charge were made responsible. If their work was pronounced good by the foremen, they received a bonus of ten per cent. The men, having an incentive, used their heads as well as their brooms and brushes. Instead of twenty-two men, ten are now doing the work, and, although they earn a bonus of one hundred and thirty dollars a month, the cleaning service costs exactly $1,072.50 per month less than formerly.

Real industrial engineering is not made up of forms and records; it is made up of experience and the application of that experience in a common-sense way. The savings may or may not be spectacular, but the method seldom is.

Do not let us get away from the thesis. We are trying to find a way to live under the wage system—to find the right balance between the

wages of capital and wages of labor. If we throw away any part of capital or any part of labor, it must come off the wages of one or the other.

I found a plant which had wholly unnecessary tools to the value of $13,200, and the works manager was really somewhat miffed at having the condition called to his attention. But suppose that same manager had hired a youth to drop out of the window a ten-cent piece every minute? He could have given steady work to the young man for about nine months, on an eight-hour schedule, before he had thrown away the same amount of money that he tossed off in tool steel.

Had that works manager chosen the window way of getting rid of money, he would have been caged as a lunatic. Why should the business control have been so loose as to permit him to waste the money in less obvious fashion? If we waste money we can not have enough profit from industrial operations, and hence either capital or labor is bound to be dissatisfied—for, somehow, the notion always obtains that, if enough money is not being made, it is because the capital charges or the wages are too high.

Industrial unrest finds its greatest cause in a dissatisfaction with the distribution of the pro-

ceeds of industry, and it is not possible to arrange a satisfactory apportionment unless the proceeds are reasonably adequate. The wasteful business is always the low-wage business. Larger sums to distribute can not come from higher prices to the consumer: they must come from better business methods. And no possible way can be found to adjust the claims of labor, unless the funds for its payment arise from scientific business conduct.

The introduction and maintenance of scientific methods is peculiarly the task of capital, but they have often failed in the past because they have been solely for the benefit of capital. Greater skill in the worker has not always meant higher wages for him.

Why? Simply because he has had no part in the conduct of industry—in the conduct of that part which concerns him. Hence the tendency to resist better methods. Industrial engineering was incomplete in that it did not sufficiently consider the human factor. (Of course I exclude the mere "system" installers.)

It is to be conceded that we must have leaders in industry, and I have no doubt that, if all leadership were wise, the led would be entirely satisfied. Bolshevism does not seek to abolish leadership. In the German industrial order, in-

finite pains were taken in the training of executives, and their conduct had much to do with the sentiment of the German worker generally that he "was getting all that was coming to him." The worker does not feel that way here or in England, because so little attention has been paid to training executives that they are not always efficient leaders. Our executives usually either work their way up, or are dropped in from the top, and in neither case is any special attention given to the mental outlook that the position demands. Therefore exact cost accounting is far from being usual, the broader views of costs are infrequent, and much rule-of-thumb direction and regulation goes on. Arbitrariness is the companion of ignorance, and not infrequently arbitrariness will seek to curry favor here and there by playing favorites. No matter how conscientious may be the men at the very top, it is the men who come into contact with the workers who determine the spirit of the place.

The petty rules that are made seemingly only for the sake of making rules, the angry firings (often to cover up the work of the foremen), and the haphazard setting of piece rates, all contribute to create in the worker an attitude adverse to the employer. Take, for instance, this

experience with piece rates that was had by a member of my organization who once worked in a machine-shop:

"There was the matter of piece-work rates. When a new job came along, the foreman tried out a few pieces, and based the rate upon what he considered a fair working speed. If the rate was high, we planned our effort to stretch the job. If we didn't, the rate would be cut. If the rate was low, we raised a howl, and generally got our increase. It was "heads I win; tails you lose." The company always lost.

"My rate was twenty-seven and one half cents an hour. This was several years ago, and admittedly I make no claim to have been the best machinist. I was very young, and, despite my rapidly increasing technical education, I was 'green' in practice. Yet on many jobs I was able to make forty cents an hour consistently and still did a satisfactory job. As a rule, I worked up a 'lead' of from one to three dollars, which meant that toward the end of the week, if I did not feel energetic, I could appear busy and eat up the lead. When the lead was gone, it was comparatively simple to work up another. I recall one of my neighbors who at one time worked up a lead of fifteen dollars by prodigious enterprise. Immediately thereafter

several rates were cut throughout the shop.

"Sometimes I tried to turn in two dollars and eighty-five cents or two dollars and ninety cents as a day's wage, but the job foreman would warn me that, if I did, the rate would be cut.

"Throughout that immense plant—though, of course, to a varying degree in different departments—production was throttled. Yet, as I have said, that plant is the presumed leader in its industry.

"Since that period of servitude, I have taken many rates in many different shops, and have arrived at several conclusions, principal among which is that the average factory head does not know whether his rates are equitable or not, and has not the means easily to find out; that he relies too much upon his foremen's knowledge, which is often superficial; and that, in nine cases out of ten, the company is the sufferer—not because the men are unwilling to work hard and earnestly, but because their production is stifled by the knowledge that the rates are and will continue to be inequitable."

That experience is characteristic. Although scientific engineering may fix right rates, it can not alone convince the workers that those rates are right. The unjust practices are of too long standing for the men to take anything on faith

in almost any department of manufacturing. Scientific industrial engineering came into the shop from the top, and was resisted. It can as well come up from the bottom—that is, by means of the representative plan that I have sketched in various places, but on which I have never been entirely specific, for the reason that the legislative system should be no more complicated than the situation needs. The flexible English Constitution, and not the rigid American one, is what the shop needs.

No representative system will be wholly successful at first; the men will not welcome it. What they will do is to keep a sharp lookout for "stool pigeons," and then cannily watch the working. The experience of General Disque with the lumbermen of the Northwest is illuminating in this connection.

General Disque was charged by the War Department to increase the production of lumber for airplanes to about twenty-five hundred per cent. He found the employers and the laboring people at swords' points. The two had fought for years, and both had taken the occasion of the war to profiteer—the one in prices and the other in wages. A strong anarchistic and I. W. W. element existed, and sabotage was frequent. When the general proposed that the workers

elect representatives to a meeting with the employers, and that this meeting settle all disputes, the men were skeptical. If General Disque had not previously gained the confidence of his men, they would probably have refused. But they consented to elect delegates, and they selected the men who had positive ideas on these points:

(1) A fixed determination to discover at the outset whether there was any "nigger in the woodpile"—whether the operators were trying to put something over.

(2) That they were not free agents, but representatives, and solely responsible to their constituents, with whom they would frequently consult.

(3) That a full year's work must be assured, and that improvements in the industry must be made in order to attain this steady employment.

It took six months to establish the fairness of the intentions in the minds of the delegates, and the most convincing argument proved to be the insistence by General Disque that the operators have exact cost systems installed, and that all the figures be open to the delegates. The exhibition of the cost sheets contradicted the assertions of the agitators that the operators were making fabulous sums.

Another man of wide experience in industrial matters has never found it necessary to exhibit cost sheets, for the reason that he gives: "The men, once they are convinced that you are playing fair, have no interest in what you make—if they are making all that they think they should."

My own experience is that cost sheets are rarely asked for; but my advice is that the cost records should be exact, and that they should be exhibited if a demand is made. It is my belief that before long the submitting of accounts to the employees will be a matter of course, and that it will then be a great stimulus to better and more economical work. The creative instinct is not fully satisfied until it knows all about what it is creating, and, human-like, if any one avenue of information is denied, that and that alone is desired. In the full fairness of purpose, an employer will not care to withhold any information that his employees desire; but, at the same time, caution is to be used in bringing up matters before the employees themselves are ready to comprehend them, or before the machinery of self-rule is in full working order.

It is not because I am afraid of the actions of the employees that I do not favor an immediate

shift to committee government, but merely because large management changes are always provocative of waste, and what we are after is the avoidance of waste.

In serious situations, undoubtedly the full measure should be given at once, for then there is nothing to disturb—the disturbance has already taken place. There are few strikes that can not be settled by the full exhibition of facts and an offer to work out a satisfactory basis together—provided the worker's own investigation of the offer proves to him its good faith, as in the case of General Disque and the lumbermen.

The exact machinery of government should be whatever suits the circumstances—the simpler always being preferred to the more complicated. The chairmen of the various shop committees may constitute the central body, or that body may be elected directly from the departments. In no case, however, should the employer have any part in the election of representatives, and neither should cognizance be taken of any debates held in the committees or assemblies—the right of free speech is to be held sacred.

It is advisable also that in the workers' assembly there should be no foremen or superin-

tendents, or other higher authorities, who might tend to curb or to punish the free expression of opinion. But, since the foremen and superintendents have rights, they too ought to have a committee or assembly, which can act concurrently with the workers' meetings.

Over all the executives should, for the present, retain the right of veto. But I have never known an executive who found it necessary to exercise the veto! Out of some hundreds of cases of quasi-democratic shop government, I have yet to find a radical measure that passed.

The supervision of foremen is one of the hardest parts of industry. A few foremen are intentionally unjust; a considerable number have gained their places by "pull" and are incompetent. What is to be done with them? It is not right that a departmental foreman should be brought to trial before a committee of his own department, for that inevitably means wire-pulling and politics. The better method is to let the central workers' body and the foremen's meeting appoint a joint committee to investigate all complaints against foremen; that joint body should have the power to recommend dismissal, and the two parent bodies should have the power to dismiss—subject, of course, to the executive veto.

These several legislative bodies and numerous committees open up a legislative side of industry with which the average organization has not officers to deal. There are minutes to be copied and filed, reports and bulletins to be published, and no end of other administrative details too great for any of the working members and for which they are unlikely to have the training and equipment. For this purpose an industrial relations secretary is advisable, and care should be taken to avoid the hand-shaking, welfare-worker type. In the Filene store the secretary is elected by the workers, although paid by the corporation. Certainly every precaution is to be taken to avoid the accusation that the secretary is a spy of the management.

In any plan, the management can afford, when any point of organization or power arises, to give rather than to withhold, and to avoid rather than to make rules. If workers are merely given a larger cage, they will be almost always pressing at the bars; but if the bars are taken away, they will give themselves to the work in hand. It is a saving grace of human nature that responsibility breeds conservatism.

CHAPTER XII

IN CONCLUSION

HAVING wandered somewhat deviously here and there among the mazes of that which we call, for want of a better phrase, the relation between capital and labor, what have we found out?

We know that it does not help the relation to call either capital or labor by names that are softer and less sheer; that capital is capital and labor is labor; that wages are wages and profits are profits. The relation is basically a monetary one, and is social only in the same way that a department-store finds it good business to provide chairs for the visitors, so that, instead of going home when tired, they may rest a while and then buy more. I can not too bluntly, too crudely, too brusquely give this aspect of the relation.

A man goes into business to make money. He hires a man to work for him in order that he, the employer, may make more money, while the man who is hired takes the employment, not

primarily that his employer may make more money, but that he may make money himself. From then on the problem becomes, whether these two will make more money together or apart. They may decide that their personal characteristics are so endearing as to be worth more than money. They may decide that their association affords mutual educational or other cultural advantages not to be valued in money. But always the fundamental monetary relation remains—the rest is only embroidery.

That fundamental relation must remain if the capitalistic system is to endure.

I prefer to use the most objectionable words, such as "capitalistic system." The phrase is accurate, even though the word "capitalist" has in a degree become odious. We must call things by their right names. In England, for instance, a gentleman will rarely accept a sum of money as compensation for his services; but he will cheerfully pocket an honorarium—the fiction being that the services have not been performed for money, but that after they have been performed the recipient is so grateful that a purse fairly wells out of him. Such verbal dodgings do not alter the cold facts, but they do confuse our view. And we want a clear vision.

If one employs and another is employed, in

that particular relation we have capital and labor. They are in no sense partners, but are buyers and sellers. If they are good buyers and sellers, if they are skilful, forehanded, and know each other, they will be associates. They will remain associates just as long as they find their association mutually profitable and agreeable, and no longer. That is the system under which we are living to-day in the United States —the capitalistic system.

There is another system, in which men do not associate themselves for profit, but are content to labor only for the right to live. They dedicate their services upon a general stipulation that they and all their fellows shall receive from a common sources each a like amount of creature comfort. This latter plan, with various backings and fillings and a plaintive desire that it be done neatly and nicely, is socialism. Dropping the circumlocutions, abandoning the hope of having both the penny and the cake, it becomes what we to-day call Bolshevism, simply because the Russians applied that term to their most direct direct-actionists.

The first system gets down to production for profit, the second to production for use. The first needs the relation of capital and labor, the second dispenses with that relation.

If the capitalistic relation is to continue, capital must live, and so must labor. In the past, in many instances, capital has tried to destroy the relations by not paying living wages; but, since there are a great many more people in the group called labor than in the group called capital, and the human body is a wonderfully stalwart thing taken in the mass, capital never did succeed in destroying the relation by getting rid of its servitors through attrition, or, to be more accurate, through malnutrition. Now the shoe is on the other foot, and the people who labor for hire are threatening to destroy capital—not by the respectable though wearisome process of starvation, but by the unrespectable but exciting torch and bullet.

The tide of this battle, to be sure, has been ebbing and flowing through many a year, or at least since the time when gunpowder withdrew from the few the armored mastery of the many. An angry peasant, armed only with a club, had little chance of beating up the excellent steel boiler that concealed his lord and master; while the lord and master, traveling about in his tank, could dispose of the peasant with equanimity. But, armed with a rifle and seated comfortably in a tree, the peasant might most expeditiously speed his lord and master to kingdom come.

So now we come to the nub of the matter. The physical force is not with the employer, but with the employee, taking the situation broadly. The ultimate might is with labor and not with capital.

If capital is to survive, it is because it is good and right and performs a function that gives it a title to life. It will live if it can demonstrate that the worker—the man who has not capital—gets more in association with it than without it. The worker must get not only more money but more dignity of position, more opportunity for self-expression, and a wider scope for creative energy—in short, greater comfort and cultural advantages with than without. That is the labor problem.

I have pointed this out in foregoing chapters in more concrete form—that is, more concretely in that I have tried to give a specific example at each point of progression. But I am insistent that when one grasps the fundamentals one is not led away from the great throbbing cause by mere embellishments—such as methods of hiring and firing, employment policies, welfare work, and the no end of incidentals that are so much easier to grasp than the actual condition in all its coldness.

Here in America we have not in any large

degree, as yet, been forced to consider this question. It is true that the I. W. W. has made large progress, but essentially we in America are on the fringes of the fight. Abroad capital and labor are face to face. In Russia capital has been destroyed. It is asking what it may do to be saved in Italy, France, Austria-Hungary, and—in a greater degree than is generally known—in England. We may or may not be next called up. That remains largely with us. And thus my somewhat academic prelude gets down to the hard facts, which are not to be dodged.

I most firmly believe that the capitalist system is the best, if it is grasped in its entirety—if it is understood, and if it is administered with skill and intelligence. I think it is perfectly possible to balance the relations between the man who works with his money and the man who works with his hands, so that each will be content, not with his share, for that is impossible, but with the fairness of the division, and will be entirely satisfied that, when a dispute arises, it is the detail and not the system that is at fault.

I think that this end is to be attained not by confusing what each is after, but by a mutually scientific and ever flexible give and take with sufficient safeguards to insure fairness.

What, then, does capital want, and what does labor want? Capital wants an adequate return upon the money it invests. "Adequate return" is determined by the circumstance of the particular case, and is a variable factor, depending upon the then purchasing power of money and upon the risk involved. In other words, capital wants to be able to live decently, with a certain amount of leisure and with a certain additional increment to guard it against the hazards of its adventures. Capital is human.

What does labor want? Nearly the same thing that capital wants. It, too, is human. But it lacks and therefore wants a dignity, a right of expression, and the opportunity (just as does capital) to reap a considerable material reward for exceptional skill or forehandedness.

It is trite indeed to say that capital is useless without labor, and labor without capital. It is, of course, true; but it is to be remembered that they perform very different functions. Capital provides the materials and implements and the skill of management, which includes the purchasing of the raw product and the disposal of the finished. Labor does the work of transformation or fabrication. They are complementary forces.

In modern systems of manufacture there has

been a growing tendency to make the man the attendant of the machine, and to preclude the exercise of individual control or expression. This is to stifle the great creative side of the man—to employ something less than the whole man.

For instance, what we know as repetitive operations go to make up a considerable part of manufacture, and in some large companies this has been carried so far that a workman not only performs a very small portion of what used to be regarded as a single operation, but so infinitely is the work subdivided that it is more than probable that the individual workman does not even know, in more than perhaps a very general way, the eventual destination of the part on which he is working, or exactly what is its function in the finished product.

His only knowledge of whether or not he is doing his work correctly comes from the acceptance or rejection of his pieces on inspection. He has no chance whatever to exercise the creative force of craftsmanship.

Therefore a part of the adjustment of the relation—and by no means a small part—is the restoring of interest in the work. The work itself must hold this interest, not merely the surroundings; and it is not at all impossible so to

order matters that the man may become master of his machine, using it as a great tool, instead of being an undignified subject of the machine.

It is possible, in most instances, to permit a man to know exactly what he is doing, to let him know that his part in the scheme of manufacturing is an essential one—that, although he may be but making a washer, unless this washer is exactly right the entire completed machine may fail properly to function. Further, he may be provided with methods of judging his own record, and, although he can not perhaps exercise the full craftsmanship of the days of hand tools, he can attain the mastery of his machine; and that will be satisfying.

I recall one old workman who became sincerely attached to a heavy planer on which he had worked for many years. He regarded the planer as his own, and he got such surprising results out of it that the management, although they repeatedly planned to scrap the ancient tool, never did so because this workman attained as high a production as did other workmen with modern planers. This seems like bad shop practice, and it might well be said that this particular workman would have done better work with a modern planer; but it so happened that he had amassed a little competency, and he re-

fused to work excepting on his own beloved machine!

An enormous force is neglected when creative craftsmanship is disregarded. I have known men almost without effort to double production simply because their interest was awakened, and cases have come under my observation in which the workers, being deeply interested, were not really very much concerned with the pay that they received. Although it is perfectly feasible so to interest men in their work that they will not bother about their pay,—and it is good so to do, because then the worker is realizing his life in his work,—it is not fair on the part of the management to pay other than the highest possible rate or leave it with the men themselves to determine whether that rate be fair. That one "can not live by bread alone" is true, but it does not connote that one may be able to live without bread.

By the stimulation of this creative instinct the way is pointed out to the ideal wage situation in which both a high standard of workmanship and a high rate of speed will be achieved. These, of necessity, make a high wage economical in cost and result—which is the ideal situation.

We have heard a great deal about intensive

production, but intensive production is not to be realized by any force that comes from the outside. You can not drive a man—he is bound to rebel. You can lead a man—but the qualities of leadership are rare. The force should come from within, and then the man will work with less fatigue than under any other circumstances. If we take the standard of production as one hundred, I can say that it is impossible to force a man much above fifty, and even then after a few days he will become rebellious and lag, and the quality of the work will suffer. But if the creative power of that man be stimulated, he can almost constantly touch one hundred, apparently without the slightest effort.

Look at this subject of wages. Wages are not all. If only a wage is involved, it is almost certain that the relation will be an unhappy one; but if the wage be not right the profits of capital and labor will be unevenly balanced and the relation is *certain* to be an unhappy one. I am confident that as yet we have not realized anything even approaching the limit in wages. I do not mean wages in mere dollars, for those values are shifting. But we have not yet so ordered the entire plan of manufacturing or sufficiently utilized the dormant creative in-

stincts to be able even to visualize the limits of per-man production.

It is an axiom that high wages can not properly be paid unless the efficiency be progressive —that is to say, unless the wages can be raised and at the same time the net cost of the product to the consumer lowered. Any raise in wages that is added to the cost of the product is not a raise at all; for it must inevitably be reflected in a higher cost of living, and therefore in another demand for an even higher wage. Adding a wage increase to the cost of the product starts one around the vicious circle to which we have become so accustomed during the war.

The point, then, is to find a ratio between wages and cost of production that will insure to the worker his proper share and that will insure to the capitalist a product that may be sold at a profit, and at the same time constantly to decrease in this process the costs, so that the product may be distributed in increasing volume and the values preserved so that the wages when paid may mean something.

This is obviously a management problem and not merely a wage problem. It goes to the capitalization of the company, to the fixed charges, to administrative efficiency, and to proper shop

management. If more capital is involved than should be, then of course the right return can not be had on it, any more than a grocer could expect to have delivery economy if he was using a splendid limousine instead of a light motor.

Too high a funded indebtedness falls into the same category, for the interest on that indebtedness must be charged into the cost of the product. You can not expect a workman to turn out a low-cost article if that with which he works is loaded with a big mortgage debt. In the same manner, the workman can not function, and capital can not realize its best, if the shop operations or sequence of operations are not planned to attain economy of effort.

In the view of capital that I have taken, the right return is not to be expected unless the work is planned for the worker. I have elsewhere noted a shop in which sixty per cent. of the wage, because of faulty tool arrangement, was paid for walking and not for working, and I could cite many more such instances.

Capital can find its greatest opportunity in so conserving itself that the turnover will be frequent—in not keeping any part of itself idle to retard turnover, in so arranging tools and machinery that there will be no waste of effort, and then in recovering waste or by-products in or-

der further to gain a profit from that which the individual worker or a small unit would of necessity waste. The large packing firms make their profit, not on the sale of meat, but on the by-products.

When we speak of the relation of capital and labor, we are talking about a broad economic problem with many, many sides, and are not merely dealing with the incidental determination of what we shall pay this or that individual.

Turning to wages, this management problem again looms up; for we find at once that the wage to be considered is not that by the day or the week or the month, but by the year, and that permanency of employment—that is, the provision of twelve months' work—is a paramount consideration.

Many a business considers that its product is seasonal. It considers that a man may be taken on or laid off according to the condition of the business. It does not consider that this man, if the best results are to be had, should be employed during the entire twelve months, and that it is the business of management so to order its planning, its sales area, its articles of manufacture, and so on, that the worker may be engaged constantly.

It may be pointed out that this feature is no

less important to capital than it is to labor; for if we work a plant only half or three quarters of a year, the product must bear the burden of the whole year, and therefore the overhead during the time of operation will be unduly high.

One of the functions of capital is to provide for twelve months' employment, and that fact is recognized in almost every industrial country except America. It is one of the secrets of German low-cost production, and it is now recognized in England not so much as a managerial as a social problem in the way of unemployment allowances. Recommendations have recently been made in England for a drastic revision of unemployment, to the end that when a man is not working he shall receive an allowance from the State. This allowance must, of course, be raised by taxation, and industry will hardly be able to bear both the burden of taxation and the burden of plant charges on an idle plant. The provision of a full year's work is a sales and executive problem of great magnitude, for which no rules are possible. It is a question of each working out his own salvation.

From what I have previously stated, it might be inferred that the balance in compensation between labor and capital could be arrived at

through some system of sharing profits; but a realization of the true relation will, I think, show that profit-sharing is essentially illogical.

Capital employs, labor is employed. Their combined efforts may not of necessity result in a profit. Profit is a reward for proper capital management. The worker may by his lack of diligence produce an article the cost of which is so high that it can not well be sold at a profit. That is, of course, bad workmanship. But, on the other hand, the worker may deliver to capital a good article at a fair price, and then capital may, by stupidity of management, forfeit the profit. The worker is entitled to pay for his contribution, and for nothing else. Profit depends upon many factors other than the actual work in the shop. To "share" is but to deceive.

Profit-sharing is not only illogical, it is also impractical. The average worker, paid long after his performance, as must be the case when profits are "shared," does not associate the work with the money he receives, and so the incentive to better workmanship is lost.

There is no common ground upon which profits may be shared between the representatives of capital and the representatives of labor; but, in most schemes of profit-sharing that

have come under my observation, what is really distributed is a bonus and not at all a profit. Regarded as a bonus, the money is infinitely more effective if paid in connection with the work done and at the time it is done.

What, then, is the right way to pay wages? There is no single system; but, generally speaking, an incentive should be provided so that wages may be measured by effort, care being taken not to put the emphasis on quantity to the exclusion of quality, and, by stimulation of the creative instinct, to avoid any possible forcing of a man from the outside.

I do not favor piece rates; neither do I favor paying a man solely for the time that he spends in the shop, unless the man be a watchman. It is not his presence, but his work, that counts.

Piece rates have their proper place, provided those rates are scientifically set by timing, provided the standards are fair, and provided that the incentive is of a definite nature fully understood by the worker. I have already sketched these several methods.

On top of the individual incentive comes a departmental incentive, based upon the work of the department as a whole. Thus each man and each department finds that it can and will be paid for what it does, and that payment de-

pends, not upon any outside force, but solely upon the service of the people themselves.

However, it is not enough to state fair rates and fair incentives. The men must know that they are fair, and the only way that they can know they are fair is by giving to them the means constantly to review the rates, to settle disputes, and to provide better ways of doing things.

This is to introduce a very considerable and eventually an entire self-government within the factory. I do not advocate any particular form of self-government, except that it is essential that the men by secret ballot choose their own representatives, that they are encouraged to be constructive and not merely complaint-gatherers, and that what they do and what they say in their meetings shall be privileged: the management shall not interfere in any way, although reserving the power of veto.

My own idea, drawn from my experience, is that it is not well to begin with too sudden a change from the autocratic to the democratic form of government. (I do not use the word "autocratic" in any invidious sense.) It is better gradually to appoint committees as the need arises, and then finally from these committees to work out a representative legislature, just as

the Government of the United States grew out of the colonial government.

The first committee that naturally presents itself is one on inspection. This is always a point of clash between the management and the men, and an inspector chosen by a committee, and by it supervised, will give far greater satisfaction both to the management and the men than can possibly an inspector appointed solely by the management. Giving this committee the power to nominate an inspector places with its members at the very beginning a constructive intent, and takes them out of the category of a mere court for the hearing of complaints. Taking the experience of the English shop committees, which are not constructive, I think the forming of any kind of a committee solely to settle disputes will, in the end, do more harm than good.

Following out the plan, committees may be appointed on efficiency, on economy, and finally on rates and wages. The chief reason that the word "efficiency" has become so detested is that rarely do the men know why the new method offered them is better than the old. They see in "efficient methods" only a greater profit for the employer and greater work for themselves. But if methods are introduced by

and with the consent of a committee, if their counsel be taken, if it be made *their* plan before introduction, then it is bound to succeed. They will then have not only a paternal interest in the plan, but they will also know by the cost sheets before them exactly how this added efficiency can be reflected in higher and higher wages.

Going forward with the consideration of the committees, one naturally finds a necessity for some representative body to which all committees are answerable; and then we further find a necessity for drawing together foremen and superintendents, in order that their brains may be pooled as well as the brains of the workers. Eventually the management will find it needs a body of a similar character, and thus we shall have erected an entire system of self-government.

I do not advocate this self-government for itself. I am not at all sure that the individual is not as happy under a skilled autocracy as under a democracy. The usual democracy in politics is unskilled. It muddles through. But that which I advocate is a democracy of skill, and I advocate it in order that the men may find an opportunity to express themselves in their work.

They are not at one with the management in point of compensation. The men and the management draw their compensation from different quarters. But they can and should be at one in this matter of intent, of desiring to bring about such an order of affairs within the factory that both may receive the highest possible compensation and put into their work the greatest dignity.

Were it possible to insure men of fairness, and to make each job in itself a full outlet for creative energy, I believe that no form of democracy would be necessary; but all of this is not possible—or, rather, I should say we do not as yet know how to develop the creative faculty for every job, nor have our managers sufficiently advanced in technique to be sure that their decisions as to division of moneys are fair. Therefore we cut right through this by putting the responsibility of fairness on the men themselves, by giving them the facts; and, while by this one stroke we eliminate much of the discontent, we also add dignity to the labor by making it *their* labor, and permit a fulness of expression, if not in the work itself, in the reason for the work.

There is no fixed plan, no set of rules, only a set of principles; and, until these principles are

mastered and applied with skill, it is impossible to say what in any case is most required. These principles are elastic, in a degree. They are, roughly, these:

(1) Capital and labor are not partners, but are in the position of buyers and sellers.

(2) Each is to be rewarded for what it does, and for nothing more.

(3) The dignity of capital is assured; the dignity of labor must be assured.

(4) The dignity of labor will in part come about through the expression of the creative instinct and in part through a participation in control at least of those matters that concern labor.

(5) This participation may take any form that seems suitable to the case; but the essentials of the participation are that it be constructive and free from managerial interference, although subject to managerial veto.

(6) The reward of labor for its effort should be direct, and associated in time of payment with the work done, and graduated, after a living wage, upon the quantity or quality of the work done with departmental as well as individual incentives.

(7) A living wage is to be calculated on the

annual basis, and the provision of twelve months' work is an integral part of any scheme.

(8) The amount of the wage is immaterial. It is the ratio to production that counts, and no raises of wages are to be added into the cost of the finished product, or at least such additions are not to be counted as raises of wages.

(9) It is the function of capital to provide facilities and plans, so that the worker may earn more with than without capital. Otherwise there is no reason for capital's being.

THE END

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